

*Zoological Record*

Vol. 87, Sect. 2, 1950

# PROTOZOA

COMPILED BY

CECIL A. HOARE, D.Sc., F.R.S.,  
and C. D. OVEY, B.Sc.

PRINTED FOR THE ZOOLOGICAL SOCIETY OF LONDON  
SOLD AT THEIR HOUSE IN REGENT'S PARK  
LONDON, N.W.8.

PRICE SEVEN SHILLINGS AND SIXPENCE

*October, 1952*

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CECIL A. HOARE, D.Sc., F.R.S.

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*Trimerorhinus tritaeniatus*, intestine (S. Africa) : *Balantidium serpentis* sp. n., *Nyctotherus ophidiae* sp. n., *Chilodon cyprini* var. n. *serpentis* (Ciliata), FANTHAM & PORTER 348.

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*Zelleriella* spp. from Paraguayan Amphibia, SCHOUTEN 1025.

Brevicipitidae : list of hosts with their protozoal parasites, WALTON 1205.

*Bufo arenarum*, intestine (Argentina) ; *Zelleriella carinii* sp. n. (Cilioph.), OTAMENDI 834.

Hylidae : list of reported parasitic protozoa, WALTON 1201.

*Lepidosiren paradoxa*, blood (Paraguay) ; *Haemogregarina bertonii* sp. n. (Sporoz.), SCHOUTEN 1026.

*Leptodactylus ocellatus*, intestine (Argentina) : *Zelleriella cuneata* sp. n., *Z. excavata* sp. n., *Nyctotherus neivai* sp. n. (Cilioph.), OTAMENDI 834.

Polypedatidae : list of hosts and their protozoal parasites, WALTON 1204.

*Rana curtipes* (tadpoles), intestine (India) : *Nyctotherus kalii* sp. n. (Ciliata), UTTANGI 1181.

*Rana pipiens* : list of reported parasitic protozoa, WALTON 1202.

*Rana pipiens*, blood (U.S.A.) : *Trypanosoma pipiensis* sp. n. (Mastig.), DIAMOND 292.

*Rana ridibunda perezi*, urinary bladder (Portugal) : *Trichodina ranae* sp. n. (Ciliata), CUNHA 253.

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*Acipenser ruthenus*, roe (Danube) : *Cocconema šulci* sp. n. (Microspor.), RAŠIN 916.

*Electrophorus electricus*, various organs (U.S.A.) : *Henneguya* (3 spp. indet.) (Myxospor.), JAKOWSKA & NIGRELLI 584.

*Gobio gobio*, subcutaneous tissue (Czechoslovakia) : *Myxobolus subepithelialis* sp. n. (Myxospor.), WEISER 1214.

*Leiognathus fasciatus*, heart (Fiji) : *Henneguya vitiensis* sp. n. (Spor. Myxospor.), LAIRD 661.

*Nemachilus* (*Cobitis*) *barbatulus*, connective tissue (Czechoslovakia) : *Myxobolus nemachili* sp. n. (Myxospor.), WEISER 1214.

*Perca fluviatilis*, skin (Germany) : *Dermocystidium percae* sp. n. (Sporoz.), REICHENBACH-KLINKE 936.

*Salmo gairdneri*, viscera (California) : *Ceratomyxa shasta* sp. n. (Spor. Myxospor.), NOBLE 824.

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*Trutta fario*, gills (Czechoslovakia) : *Dermosporidium truttae* sp. n. (Sporoz.), WEISER 1214.

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*Calotermes baretoi* and *Neotermitespaecox*, gut (Madeira) : *Macrotrichomonas hirsuta* sp. n. (Mastig.), GRASSÉ & HOLLANDE 453.

*Campylochironomus tentans* (larvae), body cavity (Germany) : *Octosporea chironomi* sp. n. (Microspor.), WEISER 1213.

*Cenaeus carnifex*, gut (S. Africa) : *Crithidia familiaris* sp. n. (Mastigoph.), GIBBS 427.

*Coptotermes* sp., gut (India) : *Vahlkampfia beltrani* sp. n. (Rhizop.), FROILANO DE MELLO 388.

*Cryptotermes lamanianus*, gut (loc. ?) : *Achemon platycaryon* gen. n., sp. n. (Mastig.), GRASSÉ & HOLLANDE 453.

*Ctenocephalides felis*, Malpighian tubes (New Zealand) : *Leptomonas ctenocephali* (Fanth. 1912) (Mastig.), LAIRD 663.

*Culex fatigans*, salivary glands (India) : developmental forms of trypanosome (avian ?), JASWANT SINGH etc. 594.

Dystiscid beetles, oesophagus (Germany) ; *Operculariella parasitica* gen. n., sp. n. (Ciliata), STAMMER 1104.

*Reticulitermes flavipes*, gut (U.S.A.) Amoeba (indet.), WENRICH 1222.

Simulium-larvae (Europe) : *Plisophora debaisieuxi* sp. n., *Nosema stricklandi* sp. n. (Microspor.), JIROVEC 603.

Termitae (indet.), gut (India) : *Holomastigotooides operculatum* sp. n. (Mastig.), FROILANO DE MELLO 387.

Termites [indet.], gut (loc. ?) : *Devescovina duboscqui* sp. n. (Mastig.), GRASSÉ & HOLLANDE 453.

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*Tipula abdominalis* (larvae), gut (Czechoslovakia) : *Leptomonas ludwigi* sp. n. (Mastig.), *Tipulocystis maxima* gen. n., sp. n. (Sporoz. Gregar.), KRAMAŘ 646.

*Trichocladius* sp. (larvae), fat body (Czechoslovakia), *Thelohania chironomi* sp. n. (Microspor.), JIROVEC 601.

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*Thyropygus* sp., intestine (India) : *Metastephanonympha karnataki* sp. n. (Mastig.), FROILANO DE MELLO & UTTANGI 289.

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*Cambarus bartoni*, muscles (U.S.A.) : *Thelohania cambari* sp. n. (Spor. Microspor.), SPRAGUE 1090.

*Daphnia* spp., body cavity (Bohemia) : *Bacillidium daphniae* sp. n. (Microspor.), JIROVEC 602.

*Leander squilla*, gut (Naples) : *Aggregata leandri* sp. n. (Sporoz.), GOODRICH 441.

*Penaeus aztecus*, muscles (Louisiana coast) : *Nosema nelsoni* sp. n. (Sporoz.), SPRAGUE 1091.

*Penaeus sitiferus*, gonads (Atlantic Ocean) : *Thelohania penaei* sp. n. (Sporoz.), SPRAGUE 1091.

*Sida crystallina*, body cavity (Bohemia) : *Duboscquia sidae* sp. n. (Microspor.), JIROVEC 602.

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*Anodonta* sp., pallial cavity (Yugoslavia) : *Conchophthirus ochridensis* sp. n. (Ciliata), GEORGÉVITCH 420.

*Crassostrea virginica*, various tissues (Atlantic coast, U.S.A.) : *Dermocystidium marinum* sp. n. (Spor. incert. sedis), MACKIN, OWEN & COLLIER 730.

*Dentalium entale*, pallial cavity (off Paramé) : *Haplosporidium dentali* sp. n. (Sporoz.), ARVY 35.

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Oligochaete (*indet.*), gut (Lake Ochrida); *Metastomum vastum* sp. n. (Ciliata), GEORGÉVITCH 422.

*Potamoceros triqueter*, intestine (Mediterranean); *Spirobutschiella chattoni* gen. n., sp. n. (Ciliata), HOVASSE 552.

*Sipunculus nudus*, coelom (Naples); *Uraspora legeri* sp. n., *U. hardyi* sp. n., *Lithocystis lankesteri* sp. n. (Flagellata), GOODRICH 442.

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*Angulogerina carlaudi* sp. n. (p. 341) [for *Uvigerina angulosa* H.A. & E. 1932, non Williamson, and *A. angulosa* Chapman and Parr 1937 (partim), non *U. a.* Williamson], Antarctic and Kerguelan, PARR Rep. B.A.N.Z. Antarctic Exped. 1929-31, Adelaide 5B (6) 1950 pp. 233-392 figs.;  $\dagger$  *A. exigua* sp. n.

(p. 238) Eocene, Maryland, U.S.A., CUSHMAN Maryland Dept. Geol. Mines & Water Resour. Bull. 2 1948 pp. 213-267 figs.

$\dagger$  *Anomalina sakuensis* sp. n. (p. 22) Cretaceous, Hokkaido, ASANO Short Pap. Inst. Geol. Paleont. Tôhoku Univ. No. 2 1950 pp. 13-22 figs.;  $\dagger$  *A. fukushimaensis* sp. n. (p. 162) Upper Cretaceous, Japan, ASANO Pacific Sci., Honolulu 4 (2) 1950 pp. 158-163 figs.;  $\dagger$  *A. sholtzensis* sp. n. (p. 34) Upper Cretaceous, Florida, COLE Geol. Bull. Florida Geol. Surv. Tallehassie, No. 20 1942 pp. 1-89 figs.;  $\dagger$  *A. roberti* sp. n. (p. 100); *A. breggiensis* sp. n. (p. 102); *A. buxtorfi* sp. n. (p. 103) Cretaceous, Italy, GANDOLFI Riv. Ital. Paleont. 48 (4) 1942 pp. 1-160 figs.;  $\dagger$  *A. punctulata* var. n. *reussi* (p. 277) [for *Rosalina complanata* var. Reuss 1863, non *A. c.* Reuss 1951, and *A. c.* Chapman 1898 non Reuss], Cretaceous, England, KHAN J.R. Micr. Soc. Lond. (3) 70 (3) 1950 pp. 268-279 figs.;  $\dagger$  *A. luxorensis* sp. n. (p. 691); *A. erobiculata* var. n. *esnehensis* (p. 691), Paleocene; *A. pseudoacuta* sp. n. (p. 691), Paleocene and Cretaceous [all recorded as nom. nud. Z.R. for 1949 now validated], Egypt, NAKKADY J. Paleont. 24 (6) 1950 pp. 675-692 figs.;  $\dagger$  *A. tasmanica*, *bassensis* spp. n. (p. 363) Tasmania, PARR Rep. B.A.N.Z. Antarctic Exped. 1929-31 5B (6) 1950 pp. 233-392 figs.

$\dagger$  *Anomalinoides vanbelleni* sp. n. (p. 36) Dano-Mountain, Algeria, DAM & SIGAL Contr. Cushman Found. Foraminif. Res. 1 (1-2) 1950 pp. 31-37 figs.

$\dagger$  *Aoujgalia* gen. n. *variabilis* sp. n. (p. 40) Carboniferous, Morocco, TERMIER Notes & Mem. Serv. Carte géol. Maroc. 13 1950 pp. 29-40 figs.

$\dagger$  *Assilina arenensis* sp. n. (p. 91); *A. subarenensis* sp. n. (p. 92), Eocene, Spain, ALMELA Notas Com. Inst. geol. España 19 1949 pp. 81-93 figs.

$\dagger$  *Astacolus ectypus* sp. n. [for *Lenticulina sculpta* (Terquem & Bert-helin) Sandidje, 1933, and *L. sarthacennis* (Schwazer) Wickenden, 1933 (partim)] (p. 8); *A. petalus* sp. n. (p. 8) Jurassic, U.S.A., LOEBLICH & TAPPAN J. Washington Acad. Sci. 40

(1) 1950 pp. 5-19 figs.; †*A. agalmatus* sp. n. (p. 44); *A. aphrastus* sp. n. (p. 45) Jurassic, U.S.A., LOEBLICH & TAPPAN J. Paleont. **24** (1) 1950 pp. 39-60 figs.

†*Asterigerina cedarkeysensis* sp. n. (p. 32) Eocene, Florida, COLE Geol. Bull. Florida Geol. Surv. No. 20 1942 pp. 1-89 figs.; †*A. indica* sp. n. (p. 81) Eocene, India, JACOB & SASTAI Sci. & Culture, Calcutta **16** (2) 1950 pp. 80-82 figs.

*Astrononion antarcticus* sp. n. (p. 371) [for *Nonion stelligerus* Wiesner 1931, non *Nonionina stelligera* d'Orbigny, and *N. stelligera* Earland 1934, non *Nonionina stelligera* d'Orbigny], Antarctic and Kerguelen, PARR Rep. B.A.N.Z. Antarctic Exped. 1929-31, **5B** (6) 1950 pp. 233-392 figs.

†*Barkerina* gen. n. (p. 5) [for *Cribrostomoides* Cushman 1933 (*partim*)] *barkerensis* sp. n. (p. 6) Lower Cretaceous, Texas, FRIZZELL & SCHWARTZ Bull. School Min. Metal. (3) 1950 no. 76 pp. 1-12 figs.

†*Bathysiphon sakuensis* sp. n. (p. 16) Cretaceous, Hokkaido, ASANO Short Pap. Inst. Geol. Paleont. Tōhoku Univ. No. 2 1950 pp. 13-22 figs.; †*B. angleseaensis* sp. n. (p. 71) Oligocene, Australia, CRESPIN Contr. Cushman Found. Foraminif. Res. **1** (3-4) 1950 pp. 70-75 figs.

†*Bdelloidina* (?) *permica* sp. n. (p. 302) Lower Permian, Texas, ELIAS J. Paleont. **24** (3) 1950 pp. 287-306 figs.

†*Bigenerina nodosaria* var. n. *hollandica* (p. 54) Plio-Pleistocene, VOORTHUYSEN Meded. Geol. Stichting Geol. Bureau, Heerlem, N.S. **4** 1950 pp. 51-72 figs. graphs.

†*Bolivina calvertensis* sp. n. (p. 306) Miocene, Maryland, U.S.A., DORSEY Maryland Dept. Geol. Mines & Water Resour. Bull. 2 1948 pp. 268-321 figs.; †*B. subcretacea* sp. n. (p. 274) Cretaceous, England, KHAN J.R. Micr. Soc. Lond. (3) **70** (3) 1950 pp. 268-279 figs.; †*B. ernehensis* sp. n. (p. 687) Paleocene and Cretaceous; *B. woodi* sp. n. (p. 687) Paleocene [both recorded as nom. nud. Z.R. 1949 now validated], Egypt, NAKADY J. Paleont. **24** (6) 1950 pp.

675-692 figs.; *B. passensis* sp. n. (p. 338) Tasmania; *B. carlaudi* sp. n. (p. 339) [for *B. punctata* Earland 1934, non d'Orbigny, and Chapman and Parr 1937], Antarctic, PARR Rep. B.A.N.Z. Antarctic Exped. 1929-31 **5B** (6) 1950 pp. 233-392 figs.; †*B. serrato-suturalis* sp. n. (p. 61), Miocene, Holland, VOORTHUYSEN Medd. Geol. Stichting Geol. Bureau, Heerlem, N.S. **4** 1950 pp. 51-72 figs. graphs.

*Borovina* gen. n. *zernovi* sp. n. (p. 871) from Salt Lake, Asiatic Russia, ŠMALGAUZEN C.R. Acad. Sci. Moscow, N.S. **75** (6) 1950 pp. 869-872 figs.

*Botellina wiesneri* sp. n. (p. 255) [for *B. labyrinthica* Wiesner 1931, non Brady]; *B. tasmanica* sp. n. (p. 256) Antarctic, PARR Rep. B.A.N.Z. Antarctic Res. Exped. 1929-31 **5B** (6) 1950 pp. 233-382 figs.

†*Boultonia cascadiensis* sp. n. (p. 53) Permian, Washington, THOMPSON, WHEELER & DANNER Contr. Cushman Found. Foraminif. Res. **1** (3-4) 1950 pp. 46-63 figs.

†*Bradya tergestina* Stache no longer considered to belong to foraminifera, but to Hydrozoa, SILVESTRI **1064**.

*Bulimina basicostata* sp. n. (p. 336) [for *B. elegantissima* var. *seminuda* Brady 1884, non *B. s.* Terquem, and Chapman 1915]; *B. submarginata* sp. n. (p. 336) Tasmania, PARR Rep. B.A.N.Z. Antarctic Exped. 1929-31 **5B** (6) 1950 pp. 233-392 figs.

†*Bullopora globulata* sp. n. (p. 378) Lower Lias, Dorset, BARNARD Quart. J. Geol. Soc. Lond. **105** (3) 1950 pp. 347-391 figs.

†*Calcitornella woodi* sp. n. [for *Nubecularia lucifuga* Brady, Jones and Parker (*partim*)] (p. 6) Jurassic, Northamptonshire, BARNARD Quart. J. Geol. Soc. Lond. **106** (1) 1950 pp. 1-36 figs.

†*Cancellina nipponica* sp. n. (p. 160) Permian, Japan, OZAWA J. Fac. Sci. Imp. Univ. Tokyo (2) **2** 1927 pp. 121-164 figs.

†*Cancris carmenensis* sp. n. Upper Pliocene, Carmen Island, Gulf of California, NATLAND Mem. Geol. Soc. Amer. **43** 1950 pp. v, 1-55 figs. table.

- †*Cassidulina laevigata* var. n. *pliocarinata* (p. 62) Plio-Pleistocene, Holland, VOORTHUYSEN Meded. Geol. Stichting Geol. Bureau, Heerlem, N.S. 4 1950 pp. 51-72 figs. graphs.
- †*Ceratobulimina woodi* sp. n. (p. 276) [for *Pulvinulina hauerii* Chapman 1898, non d'Orbigny], Cretaceous, England, KHAN J.R. Micr. Soc. Lond. (3) 70 (3) 1950 pp. 268-279 figs.
- Ceratobuliminoides* gen. n. (p. 358) *bassensis* sp. n. (p. 359) (genotype), Tasmania, PARR Rep. B.A.N.Z. Antarctic Exped. 1929-31 5B (6) 1950 pp. 233-392 figs.
- †*Chabakovia* (?) *shulgae* sp. n. (p. 300) Lower Permian, Urals, ELIAS J. Paleont. 24 (3) 1950 pp. 287-306 figs.
- †*Chapamania galea* sp. n. (p. 91) Miocene [no loc.], SILVESTRI R.C. Accad. Lincei (5) 32 (2) 1923 pp. 88-92 fig.
- †*Chilostomelloides plummerae*, *macrostoma* spp. n. (p. 36) Danomontian, Algeria, DAM & SIGAL Contr. Cushman Found. Foraminif. Res. 1 (1-2) 1950 pp. 31-37 figs.
- †*Choffatella* in the Lower Cretaceous of the Caribbean Region, MAYNE 762.
- †*Cibicides pseudoconoideus* sp. n. (p. 101); *C. subspiratus* var. n. *limbatus* (p. 102) Eocene, Italy, CITÀ Riv. Ital. Paleont. 56 (3) 1950 pp. 81-113 figs.; (4) 1950 pp. 129-152; †*C. reicheli* sp. n. (p. 106) Cretaceous, Italy, GANDOLFI Riv. Ital. Paleont. 48 (4) 1942 pp. 1-160 figs.; †*C. praecursorius* var. n. *madhensis* (p. 82) Eocene, India, JACOB & SASTRI Sci. & Culture, Calcutta 16 (2) 1950 pp. 80-82 figs.; †*C. abudurbensis* sp. n. (p. 691) Paleocene and Cretaceous; *C. multifaria* var. n. *mellahensis* (p. 692) Paleocene [both recorded as nom. nud. Z.R. for 1949 now validated], Egypt, NAKKADY J. Paleont. 24 (6) 1950 pp. 675-692 figs.; *C. subhaideri* sp. n. (p. 364) [for *Truncatulina haideri* Brady 1884, non *Rotalina haideri* d'Orbigny], Australia and Tasmania, PARR Rep. B.A.N.Z. Antarctic Exped. 1929-31 5B (6) 1950 pp. 233-392 figs.; †*C. marylandicus* sp. n. (p. 74) Eocene, Maryland, U.S.A., SHIFFLETT Maryland Dept. Geol. Mines & Water Resour. Bull. 3 1948 pp. 1-93 figs.; †*C. cookei* var. n. *limbato-suturalis* (p. 65), Plio-Pleistocene, Holland, VOORTHUYSEN Meded. Geol. Stichting Geol. Bureau, Heerlem, N.S. 4 1950 pp. 51-72 figs.
- †*Citharina latissima* sp. n. (p. 14) Jurassic, U.S.A., LOEBLICH & TAPPAN J. Washington Acad. Sci. 40 (1) 1950 pp. 5-19 figs.; †*C. entypornatus* sp. n. (p. 57) Jurassic, U.S.A., LOEBLICH & TAPPAN J. Paleont. 24 (1) 1950 pp. 39-60 figs.
- †*Citharinella compara* sp. n. (p. 14); *C. latifolia* sp. n. (p. 15) Jurassic, U.S.A., LOEBLICH & TAPPAN J. Washington Acad. Sci. 40 (1) 1950 pp. 5-19 figs.; †*C. exarata*, *rhomboidea* spp. n. (p. 58) Jurassic, U.S.A., LOEBLICH & TAPPAN J. Paleont. 24 (1) 1950 pp. 39-60 figs.
- †*Clavulina floridana* sp. n. (p. 17) Eocene, Florida, COLE Geol. Bull. Florida Geol. Surv. No. 20 1942 pp. 1-89 figs.; †*Clavulina isidrensis* sp. n. (p. 67) Cambrian, Argentine, RUSCONI Rev. Mus. Hist. nat. Mendoza 4 (3-4) 1950 pp. 63-70 figs.
- †*Clavulinoides rugulosa* sp. n. (p. 32); *C. algeriana* sp. n. (p. 33), Danomontian, Algeria, DAM & SIGAL Contr. Cushman Found. Foraminif. Res. 1 (1-2) 1950 pp. 31-37 figs.
- †*Conorbina brotzeni* sp. n. (p. 91) Cretaceous, Italy, GANDOLFI Riv. Ital. Paleont. 48 (4) 1942 pp. 1-160 figs.
- Cornuspira tasmanica* sp. n. (p. 285) off Tasmania, PARR Rep. B.A.N.Z. Antarctic Exped. 1929-31 5B (6) 1950 pp. 233-392 figs.
- †*Coskinolina elongata* sp. n. (p. 20) Eocene, Florida, COLE Geol. Bull. Florida Geol. Surv. No. 20 1942 pp. 1-89 figs.
- †*Cribrobulimina floridana* sp. n. (p. 17) Middle Eocene, Florida, COLE Geol. Bull. Florida Geol. Surv. No. 20 1942 pp. 1-89 figs.
- †*Cribrostomoides kyushuense* sp. n. (p. 77) Miocene, Japan, ASANO Contr. Cushman Found. Foraminif. Res. 1 (3-4) 1950 pp. 75-79 figs.; †*Cribrostomoides* Cushman, emend.

[= *Nonionina* d'Orb. (*partim*) *fide* Williamson 1858; *Haplophragmium* Reuss (*partim*) auct.; *Lituola* Lam. *fide* Sars 1869; *Haplophragmoides* Cushman (*partim*) 1910; *Cribrostomoides* Cushman 1910; *Labrospira* Höglund 1947] Genotype *C. bradyi* Cushman (original designation), FRIZZELL & SCHWARTZ 386.

†*Cristellaria* (*Lenticulina*) *vondereschmitti* sp. n. (p. 55) Cretaceous, Italy, GANDOLFI Riv. ital. Paleont. **48** (4) 1942 pp. 1-160 figs.; †*C. obliquecostata* sp. n. (p. 12) Paleocene, Germany, WICK Abh. senckenb. naturf. Ges. No. 468 1943 pp. 1-40 figs.

*Cycammina tasmanica* sp. n. (p. 274) off Tasmania, PARR Rep. B.A.N.Z. Antarctic Exped. 1929-31 **5B** (6) 1950 pp. 233-392 figs.; †*C. japonica* sp. n. (p. 78) Miocene, Japan, ASANO Contr. Cushman Found Foraminif. Res. **1** (3-4) 1950 pp. 75-79 figs.

†*Darbyella pulchra* sp. n. (p. 89) Eocene, Italy, CRA Riv. ital. Paleont. **56** (3) 1950 pp. 81-113 figs.; (4) 1950 pp. 129-152.

*Dentalina transhicens* sp. n. (p. 328) Antarctic and Tasmania; *D. antarctica* sp. n. (p. 329) Antarctic; *D. subemaciata* sp. n. (p. 329) Tasmania, PARR Rep. B.A.N.Z. Antarctic Exped. 1929-31 **5B** (6) 1950 pp. 233-392 figs.; †*D. langi* sp. n. [for *D. obliquestriata* Reuss *fide* Blake, 1876] (p. 361) Lower Lias, Dorset, BARNARD Quart. J. Geol. Soc. Lond. **105** (3) 1950 pp. 347-391 figs.; *D. hancocki* sp. n. (p. 316) off San Clemente Island, Pacific, CUSHMAN & McCULLOCH Allan Hancock Pacific Exped. **6** (6) 1950 pp. 295-364 figs.; †*D. gracilistriata*, *ochyra*, spp. n. (p. 10); *D. polyholca* sp. n. (p. 11) Jurassic, U.S.A., LOEBLICH & TAPPAN J. Washington Acad. Sci. **40** (1) 1950 pp. 5-19 figs.; †*D. brachista*, *ectadia* spp. n. (p. 47); *D. ejuncida*, *leptosyna*, *liota* spp. n. (p. 48) Jurassic, U.S.A., LOEBLICH & TAPPAN J. Paleont. **24** (1) 1950 pp. 39-60 figs.; †*D. ansa*, *hasta* spp. n. (p. 15) Jurassic, Montana, U.S.A., LALICKER Paleont. Contr. Univ. Kansas (Protozoa, Art. 2) pp. 3-70 figs.

†*Dimorphina janjukensis* sp. n. (p. 73) Miocene, Australia, CRESPIN Contr. Cushman Found. Foraminif. Res. **1** (3-4) 1950 pp. 70-75 figs.

†*Discocyclina* (*Asterocyclina*) *nassauensis* sp. n. (p. 79) Upper Eocene, Florida, COLE Geol. Bull. Florida Geol. Surv. No. 26 1944 pp. 1-88 figs. (pp. 104-159)

*Discorbis umbonifer* sp. n. (p. 353); *D. lobatus* sp. n. (p. 354) [for *Discorbina isabelleana* Brady 1884, non d' Orbigny], Tasmania; *D. subcomplanatus* sp. n. (p. 355) Antarctic; *D. wiesneri* sp. n. (p. 356) [for *Discorbina parisiensis* Brady 1884, non *Rosalina parisiensis* d'Orbigny, and *D. p.* Wiesner 1931, non *R. p.* d'Orbigny], Kerguelan, PARR Rep. B.A.N.Z. Antarctic Exped. 1929-31 **5B** (6) 1950 pp. 233-392 figs.; †*D. ornatissimus* var. n. *oregonensis* (p. 279) Pleistocene, Oregon, BANDY J. Paleont. **24** (3) pp. 269-281 figs.; †*D. suturatus*, *inornatus* spp. n. (p. 30) Eocene, Florida, COLE Geol. Bull. Florida Geol. Surv. No. 20 1942 pp. 1-89 figs.; †*D. warreni* sp. n. (p. 310) [for ?*D. floridana* Cushman 1932, and Cushman & Cahill 1933, non Cushman 1922]; *D. cavernata* sp. n. (p. 311) Miocene, Maryland, U.S.A., DORSEY Maryland Dept. Geol. Mines & Water Resour. Bull. **2** 1948 pp. 268-321 figs.; †*D. parkeri* sp. n. (p. 27) [for *D. nitida* Cushman & Parker 1931 non Williamson], Recent, on coasts of Mexico and Central America, NATLAND Mem. Geol. Soc. Amer. **43** 1950 pp. v, 1-55 figs.; †*D. pseudoscopos* sp. n. (p. 688); Cretaceous; *D. p.* var. n. *duwi* (p. 689) Paleocene [both recorded as nom. nud. Z.R. for 1949 now validated], Egypt, NAKKADY J. Paleont. **24** (6) 1950 pp. 675-692 figs.; †*D. amicus*, *calyptra* spp. n. (p. 65), Eocene, Maryland and Virginia respectively, U.S.A., SHIFFLETT, Maryland Dept. Geol. Mines & Water Resour. Bull. **3** 1948 pp. 1-93 figs.

*Dorothia pusilla*, *tortilis* spp. n. (p. 282) off Tasmania and Antarctic respectively, PARR Rep. B.A.N.Z. Antarctic Exped. 1929-31 **5B** (6) 1950 pp. 133-392 figs.

†*Dunbarula mathieui* sp. n. (p. 103) Permian, Tunisia, CIRY Bull. Sci. Bourgogne **11** 1948 pp. 103-111 figs.

*Dyecibicides laevis* sp. n. (p. 365)  
Tasmania, PARR Rep. B.A.N.Z.  
Antarctic Exped. 1929-31 5B (6)  
1950 pp. 233-392 figs.

*Eggerella subconica* sp. n. (p. 281)  
[for *E.* sp. Parr 1945], off Tasmania,  
PARR Rep. B.A.N.Z. Antarctic Exped.  
1929-31 5B (6) 1950 pp. 233-392  
figs.

*Ehrenbergina pacifica* var. n. *aspino-*  
*sa* (p. 345) off Tasmania and New  
South Wales, PARR Rep. B.A.N.Z.  
Antarctic Exped. 1929-31, ADELAIDE  
5B (6) 1950 pp. 293-392 figs.; †*E.*  
*alicantina* sp. n. (p. 160) Miocene,  
Spain, COLOM Notas Com. Inst. geol.  
España 20 1950 pp. 157-161 [1-5]  
fig.

†*Ellipsonodosaria calvertensis* sp. n.  
(p. 223) Miocene, Maryland, U.S.A.,  
CUSHMAN Maryland Dept. Geol.  
Mines & Water Resour. Bull. 2 1940  
pp. 213-267 figs.

†*Ellisina* gen. n. (p. 18) *spatula*  
sp. n. (genotype) (p. 19) Jurassic,  
Montana, U.S.A., LALICKER Paleont.  
Contr. Univ. Kansas (Protozoa, Art.  
2) pp. 3-20 figs.

*Elphidioides* gen. n. (p. 373)  
(genotype *Polystomella imperatrix*  
Brady), PARR Rep. B.A.N.Z. Ant-  
arctic Exped. 1929-31 5B (6) 1950  
pp. 233-392 figs.

*Elphidium mawsoni* sp. n. (p. 372);  
*E. kerguelenense* sp. n. (p. 373)  
Kerguelen, PARR Rep. B.A.N.Z.  
Antarctic Exped. 1929-31 Adelaide,  
5B (6) 1950 pp. 233-392 figs.; †*E.*  
*clarki* sp. n. (p. 282) Eocene, California,  
GRAHAM J. Paleont. 24 (3) 1950  
pp. 282-286 figs.; †*E. sendai-*  
*ense* sp. n. (p. 26), *E. advenum*  
subsp. n. *gorokuense* (p. 27) Pliocene,  
Sendai, TAKAYANAGI Short Pap.  
Inst. Geol. Paleont. Tōhoku Univ.  
No. 2 1950 pp. 23-28 figs.; †*E.*  
*haagensis* sp. n. (p. 43) Plio-Pleisto-  
cene, Holland, VOORTHUYSEN Meded.  
Geol. Stichting Geol. Bureau, Heer-  
lem, N.S. 24 1950 pp. 31-50 figs.

†*Entosolenia oslatus* sp. n. (p. 62)  
Eocene, Virginia, U.S.A., SHIFFLETT  
Maryland Dept. Geol. Mines & Water  
Resour. Bull. 3 1948 pp. 1-93 figs.

†*Eoguttulina amygdalina* sp. n.  
(p. 59) Jurassic, U.S.A., LOEBLICH  
& TAPPAN J. Paleont. 24 (1) 1950

pp. 39-60 figs.; †*E. pila*, *vaga*,  
*axilla* spp. n. (p. 19) Jurassic, Mon-  
tana, U.S.A., LALICKER Paleont.  
Contr. Univ. Kansas (Protozoa,  
Art. 2) pp. 3-20 figs.

*Eouvierina aegyptiaca* sp. n.  
(p. 686) [recorded as nom. nud. Z.R.  
for 1949 now validated], Paleocene  
and Cretaceous, Egypt, NAKKADY  
J. Paleont. 24 (16) 1950 pp. 675-692  
figs.

†*Epistomina liassica* sp. n. (p. 377)  
Lower Liass, Dorset, BARNARD Quart.  
J. Geol. Soc. Lond. 105 (3) 1950 pp.  
347-391 figs.; †*E. colomi* sp. n.  
(p. 217) [for *E. spinalifera* (Reuss)  
Colom 1948, partim]; *E. catenula*  
sp. n. (p. 219) Cretaceous, Algeria,  
DUBOURDIEN & SIGAL Bull. Soc.  
génol. Fr. (5) 19 (1-3) 1949 pp. 205-211  
figs.

*Eponides pusillus* sp. n. (p. 360)  
Tasmania, PARR Rep. B.A.N.Z.  
Antarctic Exped. 1929-31 5B (6)  
1950 pp. 233-392 figs.; †*E. blan-*  
*coensis* sp. n. p. 277, Pliocene,  
Oregon, BANDY. J. Paleont. 24 (3)  
pp. 269-281 figs.; †*E. gunteri*  
sp. n. (p. 31) Eocene, Florida, COLE  
Bull. Florida Geol. Surv. No. 20  
1942 pp. 1-89 figs.; †*E. lewiński*  
sp. n. (pp. 183, 188) Cretaceous,  
Poland, LISZKA Roczn. Polsk. Towarz.  
Geol. 18 1949 pp. 180-190 figs.;  
†*E. abatissae* var. *greigi* nom. n.  
[for *E. a.* var. *multicameratus* Peters  
& GANDOLFI 1948, preocc. *E. multi-*  
*cameratus* KLEINPELL, 1938 (p. 18)  
Oligocene, PETTERS & GANDOLFI  
Micropaleontologist 4 (1) 1950 p. 18;  
†*E. labiomargus* sp. n. (p. 67) Eocene  
Maryland and Virginia, U.S.A.,  
SHIFFLETT Maryland Dept. Geol.  
Mines & Water Resour. Bull. 3 1948  
pp. 1-93 figs.; *Eponides*, suggested  
new description, HOFKER 540; †*Fal-*  
*sopalmula antrorsa* sp. n. p. 57,  
Jurassic, U.S.A., LOEBLICH & TAP-  
PAN J. Paleont. 24 (1) 1950 pp. 39-60  
figs.; *Fissurina herguelensis* sp. n. (p.  
305) [for *Lagena staphyllearia* Brady  
1884, non *F. s.* Schwager], Kerguelan-  
Heard Island area; *F. earlandi*  
sp. n. (p. 306) [for *Lagena marginata*  
Chapman 1916, non *Serpula* (*Lagena*)  
*marginata* Walker & Boys; and  
*L. biancae* H. A. & E. 1932, non  
*Fissurina biancae* Seguenza], Antarc-

tic and Kerguelan; *F. subrevertens* sp. n. (p. 308) Antarctic; *F. fissicarinata* sp. n. (p. 309) Antarctic and Kerguelan; *F. lassensis* sp. n. (p. 309) Tasmania; *F. quinqueannulata* sp. n. (p. 310) Tasmania; *F. collinsi* sp. n. (p. 311) off Australia; *F. subsircularis*, *curvituba*, *bimarginata* spp. n. (p. 311) Tasmania; *F. aperture-alata*, *basifimbriata* spp. n. (p. 312) Tasmania (latter also in Tertiary of Victoria); *F. formosa* var. n., *angusticarinata* (p. 313) Antarctic; *F. subformosa* sp. n. (p. 313) Antarctic; *F. pacifica* sp. n. [for *Lagena* (?) *formosa* Brady 1884, and *L. f.* Sidebottom 1913 non Schwager], Tasmania, PARR Rep. B.A.N.Z. Antarctic Exped. 1929-31 **5B** (6) 1950 pp. 233-392 figs.

†*Flosculinella reicheli* sp. n. (p. 521) Tertiary, Borneo, MOHLER Ecl. geol. helv. **42** (2) 1949 [1950] pp. 521-527 figs.

†*Frankeina commutata* sp. n. [for *Frankeina* sp. ? Wickenden, 1933] (p. 6) Jurassic, U.S.A., LOEBLICH & TAPPAN J. Washington Acad. Sci. **40** (1) 1950 pp. 5-19 figs.

†*Frondicularia limbata* sp. n. (p. 370) Lower Lias, Dorset, BARNARD Quart. J. Geol. Soc. Lond. **105** (3) pp. 347-391 figs.; †*F. victoriae* sp. n. (p. 73) Miocene, Australia, CRESPIN Contr. Cushman Found. Foraminif. Res. **1** (3-4) 1950 pp. 70-75 figs.; *F. californica* sp. n. (p. 328) Pacific, CUSHMAN & McCULLOCH Allan Hancock Pacific Exped. **6** (6) 1950 pp. 295-364 figs.; †*F. spatha* sp. n. (p. 17); *F. forma* sp. n. (p. 18) Jurassic, Montana, U.S.A., LALICKER Paleont. Contr. Univ. Kansas (Protozoa), Art. 2) pp. 3-20 figs.; †*F. esnehensis* sp. n. (p. 685) [recorded as nom. nud. Z.R. 1949 was validated], Paleocene; *F. wanneri* sp. n. (p. 685) [for *F. sp. n.* Wanner 1902], Cretaceous or Paleocene, Egypt, NAKKADY J. Paleont. **24** (6) 1950 pp. 675-692 figs.; *F. bassensis* sp. n. (p. 331) [for *F. nitida* Taquem. var., Sidebottom 1918], Tasmania, PARR Rep. B.A.N.Z. Antarctic Exped. 1929-31 **5B** (6) 1950 pp. 233-392 figs.

†*Fusulinella compressa* sp. n. (p. 142) Carboniferous, Japan, OZAWA

J. Fac. Sci. Imp. Univ. Tokyo (2) **2** 1927 pp. 121-164 figs.; †*F. fusiformis* sp. n. (p. 94) Carboniferous, China, YAO Fiftieth Aniv. Papers Nat. Peking Univ. Geol. **1948** pp. 77-102 figs.

†*Fusulinellinae* subfam. n. (p. 378) Lower Permian, Russia, ROZOVSKAJA C.R. Acad. Sci. Moscow, N.S. **73** (2) 1950 pp. 375-378.

†*Fusulinidae*: Systematics, ROZOVSKAJA **972**.

†*Fusulinidae* of Japan, OZAWA **838**.

†*Fusulinid* genera *Eoverbeckina*, *Nankinella* and *Sphaerulina* in Permian, Japan, HANZAWA **495**.

†*Fusulinids* from the Permian, British Columbia, THOMPSON & VERVILLE **1161**.

†*Fusulinids* from the Pennsylvanian of Utah, THOMPSON, VERVILLE & BISSELL **1162**.

†*Fusulinids* from the Middle and Upper Permian, Washington and British Columbia, THOMPSON, WHEELER & DANNER **1163**.

†*Fusulinids* of the Permian and Carboniferous of China, YAO **1265**.

†*Gaudryina* (*Siphogaudryina*) *aisana* sp. n. (p. 31); *G. (S.) rectangularis* sp. n. (p. 32) Dano-Montian, Algeria, DAM & SIGAL Contr. Cushman Found. Foraminif. Res. **1** 1950 pp. 31-37 figs.; †*G. karihaensis* sp. n. (p. 6); *G. (Pseudogaudryina) niigataensis* sp. n. (p. 8) Pliocene, Japan, ASANO Short Pap. Inst. Geol. Paleont. Tōhoku Univ. No. 1 **1950** pp. 5-10 figs.; †*G. soldadoensis* var. n. *cavus-dulcis* (p. 683) [recorded as nom. nud. Z.R. for 1949 now validated], Paleocene, Egypt, NAKKADY J. Paleont. **24** (6) 1950 pp. 675-692 figs.

†*Gaudryinella mendrisiensis* sp. n. (p. 42) Cretaceous, Italy, GANDOLFI Riv. Ital. Paleont. **48** (4) 1942 pp. 1-160 figs.; †*G. teshioensis* sp. n. (p. 20) Cretaceous, Hokkaido, ASANO Short Pap. Inst. Geol. Paleont. Tōhoku Univ. No. 2 **1950** pp. 13-22 figs.; †*G. hanzawai*, *japonica* spp. n. (p. 9) Pliocene, Japan, ASANO Short Pap. Inst. Geol. Paleont. Tōhoku Univ. No. 1 **1950** pp. 5-10 figs.

*Glandulina antarctica* sp. n. (p. 334) [for *G. rotundata* Wiesner 1931, non Reuss, and *G. laevigata* Wiesner 1931, non *Nordosaria* (*G.*) *laevigata* d'Orbigny], Antarctic, Kerguelan and Tasmania, PARR Rep. B.A.N.Z. Antarctic Exped. 1929-31 **5B** (6) 1950 pp. 233-392 figs.; †*G. rekiataensis* sp. n. (p. 124) Tertiary, Roumania, FRANZENAU Földt, Közlöny, Budapest **50** 1920 [1921] pp. 124-126 figs.

†*Globigerina cretacea* var. *n. esnehensis* sp. n. (p. 689) [recorded as nom. nud. Z.R. for 1949 now validated], Paleocene, Egypt, NAKKADY J. Paleont. **24** (16) 1950 pp. 675-692 figs.

†*Globorotalia foehsi* subsp. *n. robusta* (p. 89) Oligocene, Trinidad, B.W.I., BOLLI Contr. CUSHMAN Found. Foraminif. Res. **1** (3-4) 1950 pp. 82-89 figs.

†Globorotalids, Upper Cretaceous, Switzerland, MORNOD **791**.

†*Globotruncana indica* sp. n. (p. 267) Cretaceous, India, JACOB & SASTRY Science & Culture **16** 1950 pp. 266-268 figs.; †*G. ticinensis* sp. n. (p. 113); *G. renzi* sp. n. (p. 124) [for transition form between *G. apenninica* and *G. linnei* of Renz (partim) 1936]; *G. stephani* sp. n. (p. 130) Cretaceous, Italy, GANDOLFI Riv. Ital. Paleont. **48** (4) 1942 pp. 1-160 figs.; †*G. (Rotalipora) reicheli* sp. n. (p. 583) [for *G. apenninica* Renz var.  $\gamma$  fide Gandolfi in litt.]; *G. (R.) montsalvensis* sp. n. (p. 584) var. *n. minor* (p. 586); *G. imbricata* sp. n. (p. 589) Upper Cretaceous, Switzerland, Mornod Ecl. geol. helv. **42** (2) 1949 [1950] pp. 573-596 figs.; †*G. aegyptiaca* sp. n. (p. 690) Paleocene and Cretaceous; *G. a.* var. *n. duwi* (p. 690) Cretaceous; *G. arca* var. *n. estichensis* (p. 690) Paleocene and Cretaceous [all recorded as nom. nud. Z.R. for 1949 now validated], Egypt, NAKKADY J. Paleont. **24** (6) 1950 pp. 675-692 figs.; †*G. stephani* var. *n. turbinata* (p. 609) [for *G. apenninica* var. *beta* Gandolfi]; *G. (Globotruncana) sigali* sp. n. (p. 610) Cretaceous, Switzerland, REICHEL Ecl. geol. helv. **42** (2) 1949 [1950] pp. 596-617 figs.

†*Grzybowskia* gen. n. (pp. 151, 167) *multifida* sp. n. (pp. 153, 168) (genotype), Eocene, Carpathians, BREDA Roczn. Polsk. Towarz. Geol. **10** 1949 pp. 151-184 figs.

†*Gumbelina striata* var. *n. compressa* (p. 686) [recorded as nom. nud. Z.R. for 1949 now, validated], Paleocene, Egypt, NAKKADY J. Paleont. **24** (6) 1950 pp. 675-692 figs.

†*Guttulina elegans* sp. n. (p. 292) [for *G. austriaca* Cushman and Ponton 1932, and Ellisor 1940, non d'Orbigny]; †*G. retiornata* sp. n. (p. 293) [for *G. costatula* Cushman 1930, and Cushman and Cahill 1933, non Galloway and Wissler], Miocene, U.S.A., DORSEY Maryland Dept. Geol. Mines & Water Resour. Bull. **2** 1948 pp. 268-321 figs.; †*G. physalia* sp. n. (p. 59) Jurassic, U.S.A., LOEBLICH & TAPPAN J. Paleont. **24** (1) 1950 pp. 39-60 figs.; †*G. fraga*, *pera*, *stilla* spp. n. (p. 20) Jurassic, Montana, U.S.A., LALICKER Paleont. Contr. Univ. Kansas (Protozoa, Art. 2) pp. 3-20 figs.

†*Gyroidina marylandica* sp. n. (p. 224) Miocene or ?Eocene, Maryland, U.S.A., CUSHMAN Maryland Dept. Geol. Mines & Water Resour. Bull. **2** 1940 pp. 213-267 figs.; †*G. nassauensis* sp. n. (p. 53) Middle Eocene, Florida, COLE Geol. Bull. Florida Geol. Surv. No. 26 1944 pp. 1-88 figs. (pp. 104-159); †*G. cretosa* sp. n. (p. 31) Upper Cretaceous, Florida, COLE Geol. Bull. Florida Geol. Surv. No. 20 1942 pp. 1-89 figs.; †*G. carmenensis* sp. n. (p. 28); *G. rothwelli* sp. n. (p. 29) Pliocene, Californian region, NATLAND Mem. Geol. Soc. Amer. **43** 1950 p. v, 1-55 figs.

†*Hantkenina* in Trinidad and Barbados, B.W.I., BRÖNNIMANN **141**.

†*Hantkeninella* subgen. n. (pp. 399, 416) Eocene, B.W.I., BRÖNNIMANN J. Paleont. **24** (4) 1950 pp. 397-420 figs.

†*Hantkenina* (*Hantkenina*) *thalmanni* sp. n. (p. 415); *H. (H.) suprasuturalis* sp. n. [for *H. alabamensis* Rey (partim)] (p. 416) Eocene, B.W.I., BRÖNNIMANN J. Paleont. **24** (4) 1950 pp. 397-420 figs.

*†Haplodhragmum slingeri* sp. n. (p. 288) Oligocene, S.W. Iran, THOMAS Ann. Mag. nat. Hist. (12) 3 1950 pp. 287-301 figs.

*Haplodhragmooides substrullissatus* sp. n. (p. 271) Antarctic, PARR Rep. B.A.N.Z. Antarctic Exped. 1929-31 5B (6) 1950 pp. 233-392 figs.; *†H. ijimai* sp. n. (p. 17) Cretaceous, Hokkaido, ASANO Short Pap. Inst. Geol. Paleont. Tôhoku Univ. No. 2 1950 pp. 13-22 figs.; *†H. orenzi* sp. n. (p. 77) Miocene, Japan. ASANO Contr. Cushman Found. Foraminif. Res. 1 (3-4) 1950 pp. 75-79 figs.; *†H. tryssa* sp. n. (p. 41) Jurassic, U.S.A., LOEBLICH & TAPPAN J. Paleont. 24 (1) 1950 pp. 39-60 figs.;

*†H. cyclamminiformis, maroccana* spp. n. (p. 39) Carboniferous, Morocco TERMIER Notes & Mem. Serv. Carte géol. Maroc. 13 1950 pp. 29-40 figs.

*†Hellenocyclina* gen. n. *beotica* sp. n. (p. 482) (genotype) [recorded Z.R. 1949 (abstract), now fully described], Upper Cretaceous, Greece, REICHEL Ecl. geol. helv. 42 (2) 1949 [1950] pp. 480-485 figs.

*Heronallenia laevis* sp. n. (p. 357); *H. polita* sp. n. (p. 358), Antarctic; *H. parva* sp. n. (p. 358), Tasmania, PARR Rep. B.A.N.Z. Antarctic Exped. 1929-31 5B (6) 1950 pp. 233-392 figs.

*†Hormosina folkestoniensis* sp. n. (p. 268) [for *H. globulifera* Chapman 1892, non Brady], Cretaceous, England, KHAN J.R. Micr. Soc. Lond. (3) 70 (3) 1950 pp. 268-279 figs.

*Hyperammina cylindrica* sp. n. (p. 254) [for *H. elongata* Brady 1884 partim, non Brady 1878 and Wiesner 1931] Antarctic, PARR Rep. B.A.N.Z. Antarctic Res. Exped. 1929-31 5B (6) 1950 pp. 233-392 figs.

*Karreriella pusilla* sp. n. (p. 283) Antarctic, PARR Rep. B.A.N.Z. Antarctic Exped. 1929-31 5B (6) 1950 pp. 233-392 figs.

*Labrospira wiesneri* sp. n. (p. 272) [for *Trochammina trulhissata* Brady 1884 (partim) non 1879, and Cushman 1910 etc.], Antarctic, PARR Rep. B.A.N.Z. Antarctic Exped. 1929-31 5B (6) 1950 pp. 233-392 figs.

*Lagena implicata* sp. n. (p. 340); *L. inepta* sp. n. (p. 341); *L. striatopunctata* var. n. *excentricitas, cista* (p. 352); *L. s. var. n. gemma* (p. 353) Pacific, CUSHMAN & McCULLOCH Allan Hancock Pacific Exped. 6 (6) 1950 pp. 295-364 figs.; *†L. exomala* sp. n. (p. 12) Lower Cretaceous, Kansas, LOEBLICH & TAPPAN Paleont. Contr. Univ. Kansas (Protozoa, Art. 3) 1950 pp. 1-15 figs.; *L. striata* var. *wiesneri* nom. n. (p. 301) [for *L. s. var. interrupta* Wiesner 1931, preocc. *L. interrupta* Williamson]; *L. sub-acuticosta* sp. n. (p. 302) [for *L. acuticosta* Wiesner 1931, non Reuss], Southern seas and Antarctic, PARR Rep. R.A.N.Z. Antarctic Exped. 1929-31 5B (6) 1950 pp. 233-392 figs.; *L. samamie* Berry now considered to be termite pellet, STONE 1112.

Lagenidae of the Pacific Ocean, CUSHMAN & McCULLOCH 261.

*†Laffitteina vallensis* sp. n. (p. 87); *L. yarzai* sp. n. (p. 90) Eocene, Spain, RUIZ DE GAONA Notas Com. Inst. geol. España 18 1948 pp. 77-92 [1-16] figs.

*†Laticarinina prima* sp. n. (p. 37) Dano-Montian, Algeria, DAM & SIGAL Contr. Cushman Found. Foraminif. Res. 1 (1-2) 1950 pp. 31-37 figs.

*Lenticulina subgibba* sp. n. (p. 321) Tasmania; *L. (Robulus) tasmanica, suborbicularis* spp. n. (p. 321) Tasmania; *L. (R.) australis* sp. n. Tasmania; *L. (R.) asterizens* sp. n. (p. 322) Antarctic; *L. (R.) antarctica* sp. n. [for *Cristellaria gibba* Wiesner 1931, non d'Orbigny], Antarctic; *L. (R.) altifrons* sp. n. (p. 323) [for *Cristellaria acutauricularis* Brady 1884, non *Nautilus acutauricularis* Fichtal and Moll], Tasmania, PARR Rep. B.A.N.Z. Antarctic Exped. 1929-31 5B (6) 1950 pp. 233-392 figs.; *†L. nakagawaensis* sp. n. (p. 21); *L. (?) teshioensis* sp. n. (p. 21) Cretaceous, Hokkaido, ASANO Short Pap. Inst. Geol. Paleont. Tôhoku Univ. No. 2 1950 pp. 13-22 figs.; *†L. dilecta* sp. n. [for *L. helios* (Terquem) Sandige 1933 and *L. sarthacensis* (Schwager) Wickenden, 1933 (partim) (p. 7) Jurassic, U.S.A., LOEBLICH & TAPPAN J. Washington Acad. Sci. 40 (1) 1950 pp. 5-19 figs.;

†*L. audax* sp. n. (p. 43) Jurassic, U.S.A., LOEBLICH & TAPPAN J. Paleont. 24 (1) 1950 pp. 39–60 figs.; †*L. pilicrensis* sp. n. (pp. 182, 187) Cretaceous, Poland, LISZKA Roczn. Polsk. Towarz. Geol. 18 1949 pp. 180–190 figs.

†*Lepidocyclina* (*Lepidocyclina*) *mantelli* var. n. *papillata* (p. 300) [for *L. (L.) m.* var. Vaughan 1927], Oligocene, U.S.A., VAUGHAN Proc. Acad. nat. Sci. Philad. 79 1927 [1928] pp. 299–303 figs.; †*L. (Nephrolepidina)* *palauensis* sp. n. (p. 25) Miocene, Palau Islands, COLE Prop. Pap. U.S. Geol. Surv. 221-B 1950 pp. 21–31 figs.; †*L. (Nephrolepidina)* *leonensis* sp. n. (p. 32) Oligocene; *L. (N.) sanfernandensis* var. n. *tallahasseensis* (p. 34) Upper Eocene; *L. (N.) suwanneensis* sp. n. (p. 39) Oligocene, Florida, COLE Geol. Bull. Florida Geol. Surv. No. 28 1945 pp. 1–74 figs.; †*L. (Pliolepidina)* *cedarkeysensis* sp. n. (p. 43) Eocene, Florida, COLE Geol. Bull. Florida Geol. Surv. No. 20 1942 pp. 1–89 figs.; †*L. mantelli* (Morton) Gümbel, notes on types of, VAUGHAN 1186.

†*Lepidorbitoides* (*Lepidorbitoides*) *floridensis* sp. n. (p. 37) Upper Cretaceous, COLE Geol. Bull. Florida Geol. Surv. No. 20 1942 pp. 1–89 figs.; †*L. ? minuscula* sp. n. (p. 24) Cretaceous, Italy, SILVESTRI Riv. Ital. Paleo. 30 1924 pp. 17–26 figs.

†*Linderina floridensis* sp. n. (p. 36) Eocene, Florida, COLE Geol. Bull. Florida Geol. Surv. No. 20 1942 pp. 1–89 figs.

†*Lingulina charagmata*, *rursa* spp. n.; *L. hathra* sp. n. [for *Frondicularia* cf. *franconica* Gümbel and *F. lingulaeformis* Schwager fide Wickenden, 1933] (p. 12) Jurassic, U.S.A., LOEBLICH & TAPPAN J. Washington Acad. Sci. 40 (1) 1950 pp. 5–19 figs.; †*L. ampliata*, *camerata* spp. n. (p. 50); *L. lordosa*, *micida*, *tumida* spp. n. (p. 51) Jurassic, U.S.A., LOEBLICH & TAPPAN J. Paleont. 24 (1) 1950 pp. 39–60 figs.

†*Lituolidae* from the Tertiary, Japan, ASANO 36.

†*Lituonella elegans* sp. n. (p. 19) Eocene, Florida, COLE Geol. Bull. Florida Geol. Surv. No. 20 1942 pp. 1–89 figs.

†*Lituotuba navetensis* nom. n. [for *L. eocenica* Cushman & Renz, 1948 preocc. *L. (?) eocenica* Yabe, 1921] p. 45, Eocene, B.W.I., RENZ Contr. Cushman Found. Foraminif. Res. 1 (3–4) 1952 pp. 44–45.

†“*Lockhartia*” *cushmani* Applin & Jordan (*non Rotalia cushmani* A. & J. 1945), but quotes used, as generic characters might possibly belong to those of *Rotalia*, APPLIN & JORDAN 32.

†*Loxostoma appliniae* var. n. *aegyptiaca* (p. 687) [recorded as nom. nud. Z.R. for 1949 now validated], Eocene and Paleocene, NAKKADY J. Paleont. 24 (6) 1950 pp. 675–692 figs.

*Marginulina hancocki* sp. n. (p. 309) Pacific, CUSHMAN & McCULLOCH Allan Hancock Pacific Exped. 6 (6) 1950 pp. 295–364 figs.; †*M. caelata*, *erromena* spp. n. (p. 46) Jurassic, U.S.A., LOEBLICH & TAPPAN J. Paleont. 24 (1) 1950 pp. 39–60 figs.; †*M. diversicostata* sp. n. (pp. 182, 188) Cretaceous, Poland, LISZKA Roczn. Polsk. Towarz. Geol. 18 1949 pp. 180–190 figs.; †*M. oridica*, *scapha* spp. n. (p. 12); *M. clava*, *oruga*, *cymba* spp. n. (p. 13); *M. sarpa*, *sicula*, *virga*, *orica*, *sporta*, *crepida* spp. n. (p. 14) Jurassic, Montana, U.S.A., LALICKER Paleont. Contr. Univ. Kansas (Protozoa, Art. 2) pp. 3–20 figs.; †*M. wetherelli* var. n. *intercostata*, *longicostata* (p. 684) [both recorded as nom. nud. Z.R. for 1949 now validated], Paleocene, Egypt, NAKKADY J. Paleont. 24 (6) 1950 pp. 675–692 figs.; *M. perobesa* sp. n. (p. 326) Tasmania, PARR Rep. B.A.N.Z. Antarctic Exped. 1929–31 5B (6) 1950 pp. 233–392 figs.; †*M. (Saracenaria)* *trigonialis* sp. n. (p. 373) Lower Lias, Dorset, BARNARD Quart. J. Geol. Soc. Lond. 105 (3) 1950 pp. 347–391 figs.

†*Marginulinopsis phragmites* sp. n. [for *M. cf. lacunata* (Terquem) Sandridge, 1933; *M. cf. lacunata* (Terquem & Berthelin) Wickenden, 1933, and *M. cf. sparsa* (T. & B.) Wickenden, 1933] (p. 9) Jurassic, U.S.A., LOEBLICH & TAPPAN J. Washington Acad. Sci. 40 (1) 1950 pp. 5–19 figs.

†*Martinottiella eocenica* nom. n. (p. 48) [ascribed by author to

Cushman and Bermudez for *Listerella gracillima* C. & B. 1937; Cushman 1937; Bermudez 1938, preocc. *L. communis* (d'Orb.) var. *gracillima* Cushman; also for *Schenkiella gracillima* Martin 1943 (list)], CUSHMAN Cushman Lab. Foraminif. Res. Spec. Publ. 8A 1947 viii + 69 pp. figs.

†*Miscellanea hedbergi, nicaraguana* spp. n. (p. 669) Eocene, Caribbean region, CIZANCOURT Bull. Soc. géol. Fr. (5) 18 (8-9) 1948 pp. 663-669 figs.

*Mississippina pacifica* sp. n. (p. 361) Tasmania, PARR Rep. B.A.N.Z. Antarctic Exped. 1929-31 5B (6) 1950 pp. 233-392 figs.

†*Nankinella hupehensis* sp. n. (p. 89) Carboniferous, China, YAO Fiftieth Aniv. Papers Nat. Peking Univ. Geol. 1948 pp. 77-102 figs.

†*Neobulimina primitiva* (Cushman) (p. 14) nov. comb. for *Virgulina primitiva* Cushman, LOEBLICH & TAPPAN Paleont. Contr. Univ. Kansas (Protozoa, Art. 3) 1950 pp. 1-15 figs.

†*Neoschwagerina simplex* sp. n. (p. 153); *N. colaniae* sp. n. (p. 157); *N. katoi* sp. n. (p. 159) [for *N. margaritae* Ozawa, 1925], Permian, Japan, OZAWA J. Fac. Sci. Imp. Univ. Tokyo (2) 2 1927 pp. 121-164 figs.; †*N. brevis, marcopensis* spp. n. (p. 59) Permian, Washington and British Columbia, THOMPSON, WHEELER & DANNER Contr. Cushman Found. Foraminif. Res. 1 (3-4) 1950 pp. 46-63 figs.

†*Nodosaria fontanesi* var. n. *flexocarinata* (p. 269) Cretaceous, England, KHAN J.R. Micr. Soc. Lond. (3) 70 (3) 1950 pp. 268-279 figs.; †*N. orthostoecha* sp. n.: for *N. cf. corallina* Gümbel *fide* Wickenden, 1933] (p. 11); *N. sphingothalama* sp. n. (p. 11) Jurassic, U.S.A., LOEBLICH & TAPPAN J. Washington Acad. Sci. 40 (1) 1950 pp. 5-19 figs.; †*N. amphigya* sp. n. (p. 48); *N. balteata, daedala, lirulata, mecista* spp. n. (p. 49), Jurassic, U.S.A., LOEBLICH & TAPPAN J. Paleont. 24 (1) 1950 pp. 39-60 figs.; †*N. linea, eleganitia, macula* spp. n. (p. 15), *N. orbita* sp. n. (p. 16) Jurassic, Montana, U.S.A.,

LALICKER Paleont. Contr. Univ. Kansas (Protozoa, Art. 2) pp. 3-20 figs.; *N. dodilaris* sp. n. (p. 330) [for *N. raphanistrum* Earland 1934, and Chapman and Parr 1937, non *Nautilus raphanistrum* Linn.], Antarctic, PARR Rep. B.A.N.Z. Antarctic Exped. 1929-31 5B (6) 1950 pp. 233-392 figs.; †*N. globulata, byfieldensis* spp. n. (p. 17); *N. obscura* var. n. *liassica* (p. 18) Jurassic, Northamptonshire, BARNARD Q. J. geol. Soc. Lond. 106 (1) 1950 pp. 1-36 figs.

†*Nonion marylandicum* sp. n. (p. 301) Miocene, Maryland, U.S.A., DORSEY Maryland Dept. Geol. Mines & Water Resour. Bull. 2 1948 pp. 268-321 figs.; †*N. scapha* var. n. *indica* (p. 81) Eocene, India, JACOB & SASTRI Sci. & Culture, Calcutta 16 (2) 1950 pp. 80-82 figs.; †*N. nanum* sp. n. (p. 67) Miocene, Holland, VOORTHUYSEN Meded. Geol. Stichting Geol. Bureau, Heerlem, N.S. 4 1950 pp. 51-72 figs.; †*N. barleeanum* var. n. *inflatum* (p. 41) [for *N. barleeanum* (Williamson) Cushman 1939], Plio-Pleistocene, Holland, VOORTHUYSEN Meded. Geol. Stichting Geol. Bureau, Heerlem, N.S. 4 1950 pp. 31-50 figs.; †*N. browni* sp. n. (p. 37) Oligocene, Florida, COLE Geol. Bull. Florida Geol. Surv. No. 26 1944 pp. 1-88 figs. (pp. 104-159).

*Nonionella globosa* sp. n. (p. 10) Japan Sea, ISHIWADA Bull. Geol. Surv. Japan 1 (4) 1950 pp. 1-13 [182-194] figs.

*Notorotalia kerguelensis* sp. n. (p. 375) Kerguelen, PARR Rep. B.A.N.Z. Antarctic Exped. 1929-31 5B (6) 1950 pp. 233-392 figs.

†*Nubecularia permiana* sp. n. (p. 61) Permian, Texas, JOHNSON J. Paleont. 24 (1) 1950 pp. 61-62 figs.

†*Nummulites* in the Eocene, Polish Carpathians, BIEDA 103; †*N. floridanus* Conrad, notes on types of, VAUGHAN 1186.

*Oolina tasmanica* sp. n. (p. 303) off Tasmania; *O. heteromorpha* sp. n. (p. 304), Antarctic, PARR Rep. B.A.N.Z. Antarctic Exped. 1929-31 5B (6) 1950 pp. 233-392 figs.

**†Operculina campi sp. n.** (p. 285) Eocene, California, GRAHAM J. Paleont. **24** (3) 1950 pp. 282–286 figs.

**†Operculinoides gravelli sp. n.** (p. 44) Middle Eocene; *O. nassauensis* sp. n. (p. 47) Oligocene, Florida, COLE Geol. Bull. Florida Geol. Surv. No. 26 1944 pp. 1–88 figs. (pp. 104–159).

**†Ophthalmidium rotula** sp. n. (p. 11) Jurassic, Montana, U.S.A., LALICKER Paleont. Contr. Univ. Kansas (Protozoa, Art. 2) pp. 3–20.

**†Orthophragmina** in the Eocene, Polish Carpathians, BIEBA **103**.

**†Paleopolymorphina gemma** sp. n. (p. 18) Jurassic, Montana, U.S.A., LALICKER Paleont. Contr. Univ. Kansas (Protozoa, Art 2) pp. 3–20 figs.; **†P. elecatooides** sp. n. (p. 59) Jurassic, U.S.A., LOEBLICH & TAPPAN J. Paleont. **24** (1) 1950 pp. 39–60 figs.

**†Palmula toulmini, sigmoicosta** spp. n. (p. 35) Dano-Montian, Algeria, DAM & SIGAL Contr. Cushman Found. Foraminif. Res. **1** (1–2) 1950 pp. 31–37 figs.; **†P. woodi** sp. n. p. 684; *P. w. var. n. undulata* (p. 685) [both recorded as nom. nud. Z.R. for 1949 now validated], Paleocene, Egypt, NAKKADY J. Paleont. **24** (6) 1950 pp. 675–692 figs.

**Parafissurina abnormis** sp. n. (p. 314) Antarctic; **P. basicarinata** sp. n. (p. 314) Tasmania; **P. biannulata** sp. n. (p. 315) Tasmania; **P. magnilabiata** sp. n. (p. 316) Macquarie Island; **P. quadrata** sp. n. (p. 316) Tasmania; **P. scaphaeformis** sp. n. (p. 317) Tasmania; **P. curta, spinosa, subcarinata** spp. n. (p. 318) Antarctic; **P. subcircularis** sp. n. (p. 318) Tasmania; **P. sublata** sp. n. (p. 319) Tasmania; **P. subovata** sp. n. (p. 319) Antarctic, Kerguelan and Macquarie Island; **P. tasmanica, tricarinata** spp. n. (p. 319) Tasmania; **P. wiesneri** sp. n. (p. 320) Antarctic, PARR Rep. B.A.N.Z. Antarctic Exped. 1929–31 **5B** (6) 1950 pp. 233–392 figs.

**†Parafusulina armstrongi** sp. n. (p. 69) Permian, British Columbia, THOMPSON & VERVILLE Contr. Cushman Found. Foraminif. Res. **1** (3–4) pp. 67–70 figs.

**Patellina antarctica** sp. n. (p. 352) [for *P. corrugata* Chapman 1937, non Williamson], Antarctic, PARR Rep. B.A.N.Z. Antarctic Exped. 1929–31 **5B** (6) 1950 pp. 233–392; **†P. crista** sp. n. (p. 20) Jurassic, Montana, U.S.A., LALICKER Paleont. Contr. Univ. Kansas (Protozoa, Art. 2) pp. 3–20 figs.

**Pelosinella** gen. n. **bicaudata** sp. n. (p. 261) (genotype), Kerguelen, PARR Rep. B.A.N.Z. Antarctic Exped. 1929–31 **5B** (5) 1950 pp. 233–392 figs.

Peneroplidae, re-grouping and systematics of the, HOFKER **539**.

**†Phenacophragma** gen. n. **assurgens** sp. n. (p. 78) (genotype), Lower Cretaceous, Texas, APPLIN, LOEBLICH & TAPPAN J. Wash. Acad. Sci. **40** (3) 1950 pp. 75–79 figs.

**Planispirinoides** gen. n. (p. 287) (genotype *Miliolina bucculenta* Brady), South Seas and Antarctic, PARR Rep. B.A.N.Z. Antarctic Exped. 1929–31 **5B** (6) 1950 pp. 233–392 figs.

**†Planularia planotrochiformis** sp. n. Cretaceous, U.S.A., HUSSEY & McNULTY J. Paleont. **24** (4) 1950 pp. 472–473 figs.; **†P. palmerana** nom. n. [for *P. palmerae* Garrett 1942, preocc. van Bellen 1941] (p. 506) Miocene, Texas, GARRETT J. Paleont. **24** (4) 1950 p. 506.

**†Planulina cedarkeysensis** sp. n. (p. 35) Upper Cretaceous, Florida, COLE Geol. Bull. Florida Geol. Surv. No. 20 1942 pp. 1–89 figs.

**†Plectogyra** gen. n. (p. 3) **plectogyra** sp. n. (genotype) (p. 3), Carboniferous, U.S.A., ZELLER Paleont. Contr. Univ. Kansas (Protozoa, Art. 4) 1950 pp. 1–23 figs.

**Plectotrochammina** gen. n. **subglobosa** sp. n. (p. 280) (genotype) Antarctic, PARR Rep. B.A.N.Z. Antarctic Exped. 1929–31 **5B** (6) 1950 pp. 233–392 figs.

**†Proteonina alexanderi** sp. n. (p. 5) Lower Cretaceous, Kansas, LOEBLICH & TAPPAN Paleont. Contr. Univ. Kansas (Protozoa, Art. 3) 1950 pp. 1–15 figs.

**†Protopenoperothis** gen. n. (p. 393) (genotype *Peneroplis senoniensis* Hofker), Cretaceous and Eocene,

HOFKER J.R. Micr. Soc. Lond. (3) **70** (4) 1950 pp. 388-396 figs.

*Psammophax tasmanica* sp. n. (p. 257) off Tasmania, PARR Rep. B.A.N.Z. Antarctic Res. Exped. 1929-31 **5B** (6) 1950 pp. 233-392 figs.

†*Pseudoclavulina globulifera* sp. n. (p. 32) Dano-Montian, Algeria, DAM & SIGAL Contr. Cushman Found. Foraminif. Res. **1** (1-2) 1950 pp. 31-37 figs.

†*Pseudogaudryinella compacta* sp. n. (p. 33) Dano-Montian, Algeria, DAM & SIGAL Contr. Cushman Found. Foraminif. Res. **1** (1-2) 1950 pp. 31-37 figs.

†*Pseudodoliolina oliviformis* sp. n. (p. 58) Permian, Washington and British Columbia, THOMPSON, WHEELER & DANNER Contr. Cushman Found. Foraminif. Res. **1** (3-4) 1950 pp. 46-63 figs.

†*Pseudoglandulina multicostata* var. n. *semicostata* [for *Nodosaria* sp. Wicher, 1938] (p. 364), Lower Lias, Dorset, BARNARD Quart. J. Geol. Soc. Lond. **105** (3) 1950 pp. 347-391 figs.; †*P. traphera* sp. n. (p. 50) Jurassic, U.S.A., LOEBLICH & TAPPAN H. Paleont. **24** (1) 1950 pp. 39-60 figs.; †*P. alfaensis* sp. n. (p. 68) Cambrian, Argentine, RUSCONI Rev. Mus. Hist. nat. Mendoza **4** (3-4) 1950 pp. 63-70 figs.

†*Pseudophragmina* (*Proporocyclina*) *cedarkeysensis* sp. n. (p. 81) [for *P. (P.) zaragozensis* Cole 1942 non *Discocyclina zaragoensis* Vaughan 1929], Eocene; *P. (P.) hannai* sp. n. (p. 84) Middle Eocene, Florida, COLE Geol. Bull. Florida Geol. Surv. No. 26 1944 pp. 1-88 figs. (pp. 104-159).

†*Pseudoplanulinella* gen. n. (p. 63) *hieroglyphica* sp. n. (genotype) (p. 64) var. n. *bartensteini* (p. 66) Oligocene, Germany, SIGAL Bull. Soc. géol. Fr. (5) **20** (1-3) 1950 pp. 63-71 figs.

†*Pseudopolymorphina calvertensis* sp. n. (p. 218) Miocene, Maryland, U.S.A., CUSHMAN Maryland Dept. Geol. Mines & Water Resour. Bull. **2 1948** pp. 213-267 figs.; †*P. avia, pera* spp. n. (p. 18) Jurassic, Montana, U.S.A., LALICKER Paleont. Contr. Univ. Kansas (Protozoa, Att. 2) pp. 3-20 figs.

†*Ptychocladia* Ulrich and Bassler now considered to belong to foraminifera; *P. agellus* var. n. *tenuis, rotaliformis* (p. 295); *P. bassleri* sp. n. (p. 296) Carboniferous, U.S.A., ELIAS J. Paleont. **24** (3) 1950 pp. 287-306 figs.

†*Ptychocladidae* fam. n. (p. 288) Palaeozoic, ELIAS J. Paleont. **24** (3) 1950 pp. 287-306 figs.

*Pullenia subsphaerica* sp. n. (p. 346) Antarctic, PARR Rep. B.A.N.Z. Antarctic Exped. 1929-31 **5B** (6) 1950 pp. 233-392 figs.; †*P. duplicata* Stainforth 1949 formally described and designated, Oligocene, Germany, STAINFORTH **1102**.

†*Puteolus* gen. n. (p. 394) (genotype *Peneroplis proteus* d'Orbigny), Eocene to recent, HOFKER J.R. Micr. Soc. Lond. (3) **70** (4) 1950 pp. 388-396 figs.

*Pyrgo subpisum* sp. n. (p. 297); *P. wiesneri* sp. n. (p. 297) [for *Biloculina sarsi* Wiesner 1931, non Schlumberger]; *P. lateralis* sp. n. (p. 298) Antarctic; *P. subglobulus* sp. n. (p. 298) off Tasmania, PARR Rep. B.A.N.Z. Antarctic Exped. 1929-31 **5B** (6) 1950 pp. 233-392 figs.

†*Pyrulina carebara* sp. n. (p. 13) Lower Cretaceous, Kansas, LOEBLICH & TAPPAN Paleont. Contr. Univ. Kansas (Protozoa, Art. 3) 1950 pp. 1-15 figs.

†*Queraltina* gen. n. (p. 73) *epistominoides* sp. n. (p. 74) (genotype); *Q. colomi* sp. n. (p. 77); *Q. hispanica* sp. n. (p. 78); *Q. crenata* sp. n. (p. 79), Eocene, Pyrenees, MARIE Bull. Soc. géol. Fr. (5) **20** (1-3) 1950 pp. 73-80 figs.

*Quinqueloculina anguina* var. n. *wiesneri* (p. 290) off Tasmania, PARR Rep. B.A.N.Z. Antarctic Exped. 1929-31 **5B** (6) 1950 pp. 233-392 figs.; †*Q. nanna* sp. n. (p. 10) Lower Cretaceous, Kansas, LOEBLICH & TAPPAN Paleont. Contr. Univ. Kansas (Protozoa, Art. 3) 1950 pp. 1-15 figs.; †*Q. singletoni* sp. n. (p. 72) Oligocene; *Q. ornithopetra* sp. n. (p. 73) Eocene, Australia, CRESPIN Contr. Cushman Found. Foraminif. Res. **1** (3-4) 1950 pp. 70-75 figs.

$\dagger$ *Ramulina fusiformis* sp. n. (p. 272) [for *Marginulina* cf. *Dentalina aculeata* Berthelin 1880; *R. globulifera* Chapman 1896, non Brady, and *R. sp.* Tappan 1940], Cretaceous, England, KHAN J.R. Micr. Soc. Lond. (3) **70** (3) 1950 pp. 268–279 figs.

$\dagger$ *Ramulinella esphyma* sp. n. (p. 59) Jurassic, U.S.A., LOEBLICH & TAPPAN J. Paleont. **24** (1) 1950 pp. 39–60 figs.

*Reophax brevis, davisi* spp. n. (p. 265) off Tasmania and Antarctic respectively; *R. kerguelensis* sp. n. Kerguelen; *R. pseudodistans* var. n. *tenuis* (p. 268) off Tasmania; *R. subdentaliniformis* sp. n. (p. 269) [for *R. dentaliniformis* Earland 1934 (partim), non Brady], Antarctic, PARR Rep. B.A.N.Z. Antarctic Exped. 1929–31 **5B** (6) 1950 pp. 233–392 figs.;  $\dagger$ *R. sundancensis* sp. n. (p. 41) Jurassic, U.S.A., LOEBLICH & TAPPAN J. Paleont. **24** (1) 1950 pp. 39–60 figs.

$\dagger$ *Reusella aegyptiaca* sp. n. (p. 687) [recorded as nom. nud. Z.R. for 1949 now validated], Cretaceous, Egypt, NAKKADY J. Paleont. **24** (6) 1950 pp. 675–692 figs.

$\dagger$ *Rhenothyra* gen. n. *refrathiensis* sp. n. (p. 184) (genotype), Middle Devonian, Germany, BECKMANN N. Jahrb. Geol. Paläont. Stuttgart **6** 1950 pp. 183–187 figs.

$\dagger$ *Robulus futabaensis* sp. n. (p. 159) Upper Cretaceous, Japan, ASANO Pacific Sci., Honolulu **4** (2) 1950 pp. 158–163 figs.;  $\dagger$ *R. ellisana* sp. n. (p. 11); *R. bulla* sp. n. (p. 12) Jurassic, Montana, U.S.A., LALICKER Paleont. Contr. Univ. Kansas (Protozoa, Art. 2) pp. 3–70 figs.;  $\dagger$ *R. mellahensis* sp. n. (p. 683) Cretaceous; *R. m. var. n. obesus* (p. 683) Eocene and Paleocene [both recorded as nom. nud. Z.R. for 1949 now validated], Egypt, NAKKADY J. Paleont. **24** (6) 1950 pp. 675–692 figs.;  $\dagger$ *R. midwayensis* var. n. *virginanus* (p. 48), Eocene, Maryland and Virginia, U.S.A., SHIFFLETT Maryland Dept. Geol. Mines & Water Resour. Bull. 3 **1948** pp. 1–93 figs.

$\dagger$ *Rotalia subcor pulenta* sp. n. (p. 278), Pliocene; *R. tenerrima* sp. n. (p. 278) Pleistocene, Oregon, BANDY J. Paleont. **24** (3) pp. 269–281 figs.;

$\dagger$ *R. subgranulosa, crookshankiana* spp. n. (p. 81) Eocene, India, JACOB & SASTRI Sci. & Culture, Calcutta **16** (2) 1950 pp. 80–82 figs.

$\dagger$ *Saracenaria italicica* var. n. *politus* (p. 270) Cretaceous, England, KHAN J.R. Micr. Soc. Lond. (3) **70** (3) 1950 pp. 268–279 figs.;  $\dagger$ *S. tunesiana* sp. n. (p. 36) Dano-Montian, Algeria and Tunisia, DAM & SIGAL Contr. Cushman Found. Foraminif. Res. **1** (1–2) 1950 pp. 31–37 figs.

$\dagger$ *Schellwienia japonica* var. n. *truncata, subobsoleta* var. n. *okuboensis* (p. 149) Carboniferous, Japan, OZAWA J. Fac. Sci. Imp. Univ. Tokyo (2) **2** 1927 pp. 121–164 figs.

$\dagger$ *Schenckella alabamensis* nom. n. (p. 51) [for *Listerella laevis* Cushman 1940 non *L. levis* Finlay 1939], Paleocene, U.S.A., CUSHMAN Cushman Lab. Foraminif. Res. Spec. Publ. **8A** 1947 viii + 69 pp. figs.; *S. antarctica* sp. n. (p. 284) [for *Clavulina communis* Wiesner 1931, Earland 1933, and Chapman and Parr 1937, non d'Orbigny], Antarctic, PARR Rep. B.A.N.Z. Antarctic Exped. 1929–31 **5B** (6) 1950 pp. 233–392 figs.

$\dagger$ *Schwagerina caurus, andersoni* [for *Leeina* ? sp. Anderson 1941, and *Schwagerina* sp. Thompson and Wheeler 1942] spp. n. (p. 55), Permian, Washington and British Columbia, THOMPSON, WHEELER & DANNER Contr. Cushman Found. Foraminif. Res. **1** (3–4) 1950 pp. 46–63 figs.;  $\dagger$ *S. carbonica* sp. n. (p. 162) Carboniferous, Russia, NOVIK Sci. Mag. Geol. Catheder Dnepropetr. 1927 pp. 155–167 figs.

$\dagger$ *Siderolites olaztiensis* newly described, RUIZ DE GAONA **977**.

*Sigmoilina sabulosa* sp. n. (p. 292) off Tasmania, PARR Rep. B.A.N.Z. Antarctic Exped. 1929–31 **5B** (6) 1950 pp. 233–392 figs.

$\dagger$ *Sigmomorphina marylandica* sp. n. (p. 219) Miocene, Maryland, U.S.A., CUSHMAN Maryland Dept. Geol. Mines & Water Resour. Bull. 2 **1948** pp. 213–287 figs.;  $\dagger$ *S. floridana* sp. n. (p. 26) Eocene, Florida, COLE Geol. Bull. Florida Geol. Surv. No. 20 1942 pp. 1–89 figs.;  $\dagger$ *S. nevifera* sp. n.

(p. 298) [for *Pyrulina albatrossi* Cushman and Cahill], Miocene, Maryland, U.S.A., DORSEY Maryland Dept. Geol. Mines & Water Resour. Bull. 2 1948 pp. 268-321 figs.

†*Silicosigmoilina futabaensis* sp. n. (p. 159) Upper Cretaceous, Japan, ASANO Pacific Sci., Honolulu 4 (2) 1950 pp. 158-163 figs.

†*Siphogenerinoides oveyi* sp. n. (p. 686) var. *n. compressa* (p. 687) [both recorded as nom. nud. Z.R. for 1949 now validated], Cretaceous, Egypt, NAKKADY J. Paleont. 24 (6) 1950 pp. 675-692 figs.

†*Siphoglobulinina* gen. n. (p. 332), *siphonifera* sp. n. (p. 333) (genotype), Miocene, Victoria and off Tasmania, PARR Rep. B.A.N.Z. Antarctic Exped. 1929-31 5B (6) 1950 pp. 233-392 figs.

†*Siphonina nassauensis* sp. n. (p. 54) Oligocene, Florida, COLE Geol. Bull. Florida Geol. Surv. No. 26 1944 pp. 1-88 figs. (pp. 104-159).

*Siphonvigerina* gen. n. (p. 342) (genotype *Uvigerina porrecta* Brady var. *fimbriata* Sidebottom), PARR Rep. B.A.N.Z. Antarctic Exped. 1929-31 5B (6) 1950 pp. 233-392 figs.

†*Spirillina ticinensis* sp. n. (p. 171) Lias, Switzerland, SCHWEIZHAUSER Verh. Schweiz. naturf. Ges. 130 1950 p. 171; †*S. amphelicta* sp. n. (p. 60) Jurassic, U.S.A., LOEBLICH & TAPPAN J. Paleont. 24 (1) 1950 pp. 39-60 figs.; *S. pectinomarginata* var. *n. aspinosa* (p. 348); *S. multispira* sp. n. (p. 349) Tasmania; *S. obconica* var. *n. dorsoserrata* (p. 350); *S. radiosha* sp. n. (p. 350) Antarctic, PARR Rep. B.A.N.Z. Antarctic Exped. 1929-31 5B (6) 1950 pp. 233-392 figs.

*Spireloculina pellucida* sp. n. (p. 7) Red Sea, SAID Contr. Cushman Found. Foraminif. Res. 1 (1-2) 1950 pp. 4-9 figs.; *S. subimpressa* sp. n. (p. 291) off Tasmania and East Coast of Australia; *S. sublimata* sp. n. (p. 291), off Western Australia; *S. angusteoralis* sp. n. (p. 292) Shore sand, Victoria, PARR Rep. B.A.N.Z. Antarctic Exped. 1929-31 5B (1) 1950 pp. 233-392 figs.

†*Spirolectammina exilis* sp. n. (p. 275) [for *S. gracilis* Cushman & Cahill 1933, non Von Muenster];

*S. spinosa* sp. n. (p. 276), Miocene, Maryland, U.S.A., DORSEY Maryland Dept. Geol. Mines & Water Resour. Bull. 2 1948 pp. 268-321 figs.; †*S. ezoana* sp. n. (p. 18) Cretaceous, Hokkaido, ASANO Short Pap. Inst. Geol. Paleont. Tôhoku Univ. No. 2 1950 pp. 13-22 figs.; †*S. plummerae* nom. n. (p. 226) [for *Textularia carinata* var. *expansa* Plummer 1926, preocc. *S. expansa* Le Roy (= *T. c. var. e. fide* Le Roy)], Eocene, Maryland, U.S.A., CUSHMAN Maryland Dept. Geol. Mines & Water Resour. Bull. 2 1948 pp. 213-267 figs.

*Spirotextrularia obesa* sp. n. (p. 266) off Tasmania, PARR Rep. B.A.N.Z. Antarctic Exped. 1929-31 5B (6) 1950 pp. 233-392 figs.

*Sporadogenerina proteiformis* (Flint) (original designation) to include *S. flintii* Cushman (genotype) [originally described as *Ramulina proteiformis* Flint 1899 (*partim*)], Atlantic, FRIZZELL 385.

†*Stensiöina esnehensis* sp. n. (p. 689) [recorded as nom. nud. Z.R. for 1949 now validated], Paleocene, Egypt, NAKKADY J. Paleont. 24 (6) 1950 pp. 675-692 figs.

†*Stichocibicides cerviculus* sp. n. (p. 76) Virginia, U.S.A., SHIFFLETT Maryland Dept. Geol. Mines & Water Resour. Bull. 3 1948 pp. 1-93 figs.

†*Stomatostoecha* gen. n. *plummerae* sp. n. (p. 76) (genotype), Lower Cretaceous, Texas, APPLIN, LOEBLICH & TAPPAN J. Wash. Acad. Sci. 40 (3) 1950 pp. 75-79 figs.

†*Streblus beccarii* var. *n. globosus* (p. 68) Plio-Pleistocene, Holland, VOORTHUYSEN Meded. Geol. Stichting Geol. Bureau, Heerlem, N.S. 4 1950 pp. 51-72 figs.; †*S. beccarii* var. *n. pseudotepidus* (p. 45) Plio-Pleistocene, Holland, VOORTHUYSEN Meded. Geol. Stichting Geol. Bureau, Heerlem, N.S. 24 1950 pp. 31-50 figs.

*Textularia australis* sp. n. (p. 275) off Western Australia, PARR Rep. B.A.N.Z. Antarctic Exped. 1929-31 5B (6) 1950 pp. 233-392 figs.; †*T. obliqua*, *ultima-inflata* spp. n. (p. 279) Miocene, Maryland, U.S.A., DORSEY Maryland Dept. Geol. Mines & Water

Resour. Bull. 2 1948 pp. 268-321  
figs.; †*T. eggeri* sp. n. (p. 116) [for  
*T.* sp. Egger 1909], Cretaceous,  
Bavaria, FÖRSTER & OEBBEKE Geog-  
nosc. Jahres. 35 1922 pp. 83-160  
figs.; *T. ornatissima* sp. n. (p. 4)  
Red Sea, SAID Contr. Cushman  
Found. Foraminif. Res. 1 (1-2) 1950  
pp. 4-9 figs.

†*Textulariella cushmani* sp. n.  
(p. 33) Dano-Montian, Algeria, DAM  
& SIGAL Contr. Cushman Found.  
Foraminif. Res. 1 (1-2) 1950 pp.  
31-37 figs.

*Tholosina spiculifera* sp. n. (p. 262)  
Antarctic, PARR Rep. B.A.N.Z. Ant-  
arctic Exped. 1929-31 5B (6) 1950  
pp. 233-382 figs.

†*Ticinella* subgen. n. (of *Globo-*  
*truncana*) (p. 600) (subgenotype  
*Anomalina roberti* Gandolfi), Cre-  
taceous, REICHEL Ecl. geol. helv. 42  
(2) 1949 [1950] pp. 596-617 figs.

†*Tremastegina* gen. n. [nom. nud.]  
(p. 166) Eocene, Barbados, BÖNNI-  
MANN Verh. schweiz. naturf. Ges. 130  
1950 p. 166.

†*Tribrachia reussi* sp. n. (p. 121)  
[for *Frondicularia cordai* var. *tribra-*  
*chiata* Reuss 1846 (*partim*) and *F.*  
*inversa* Reuss *fide* Beissel 1891, and  
*F. c.* forma *t.* Reuss *fide* Franke  
1829]; *T. schubertii* sp. n. (p. 122);  
*T. westfalica* sp. n. (p. 123) [for  
*Frondicularia turgida* Reuss 1846,  
*partim* (montrous form)]; *T. sub-*  
*cretacea* sp. n. (p. 125) Cretaceous,  
Germany, BARTENSTEIN & BRAND  
Senckenbergiana, Frankfurt 31 (1-2)  
1950 pp. 121-126 figs.; †*T. inelegans*  
sp. n. (p. 16) Jurassic, U.S.A.,  
LOEBLICH & TAPPAN J. Washington  
Acad. Sci. 40 (1) 1950 pp. 5-19 figs.;  
†*T.* Schubert in Cretaceous, Ger-  
many, BARTENSTEIN & BRAND 68.

*Triloculina striatula*, *lamellidens*,  
spp. n. (p. 294) off Western Australia  
and Tasmania respectively; *T.*  
*subvalvularis* sp. n. (p. 296) [for  
*Miliolina valvularis* Brady 1884, non  
*T. valvularis* Reuss], off New Zealand  
and Antarctic, PARR Rep. B.A.N.Z.  
Antarctic Exped. 1929-31 5B (6)  
1950 pp. 233-392 figs.

†*Triloclinella* gen. n. *obliquinodus*  
sp. n. (genotype) (p. 90) Lower  
Pleistocene, California, RICCIO Contr.

Cushman Found. Foraminif. Res. 1  
(3-4) 1950 p. 90 figs.

†*Tristix gaultina* sp. n. (p. 270)  
Cretaceous, England, KHAN J.R.  
Micr. Soc. Lond. (3) 70 (3) 1950 pp.  
268-279 figs.; †*T. nituda* sp. n. [for  
*Dentalinopsis oölitica*? (Terquem)  
Wickenden, 1933] (p. 13) Jurassic,  
U.S.A., LOEBLICH & TAPPAN J.  
Washington Acad. Sci. 40 (1) 1950  
pp. 5-19 figs.; †*T. alcima* sp. n.  
(p. 52); *T. reesidei* sp. n. (p. 53);  
Jurassic, U.S.A., LOEBLICH & TAP-  
PAN J. Paleont. 24 (1) 1950 pp. 39-60  
figs.

†*Triticites provoensis* sp. n. (p.  
446); *T. grangerensis* sp. n. (p. 451)  
Pennsylvanian, Utah, THOMPSON,  
VERVILLE & BISSELL J. Paleont. 24  
(4) 1950 pp. 430-465 figs.

*Trochammina rugosa*, *appressa* spp.  
n. (p. 277) Antarctic and off Tasmania  
respectively; *T. spiculolega*, *gabo-*  
*ensis*, *sorosa* spp. n. (p. 278) off  
Tasmania (*T. gaboensis* also off  
Gabo Is.); *T. tasmanica* sp. n.  
(p. 279) off Tasmania; *T. wiesneri*  
sp. n. (p. 279) [for *T. inflata* Wiesner  
1931, non *Nautilus inflatus* Montagu],  
Antarctic; *T. antarctica* sp. n. (p.  
280), Antarctic, PARR Rep. B.A.N.Z.  
Antarctic Exped. 1929-31 5B (6)  
1950 pp. 233-392 figs.; †*T. hisan-*  
*hamaensis* sp. n. (p. 159) Upper  
Cretaceous, Japan, ASANO Pacific  
Sci., Honolulu 4 (2) 1950 pp. 158-163  
figs.; *T. japonica* sp. n. (p. 9) Japan  
Sea, ISHIWADA Bull. Geol. Surv.  
Japan 1 (4) 1950 pp. 1-13 [182-194]  
figs.; †*T. callima* sp. n. (p. 10);  
*T. lattai* sp. n. (p. 11) Lower Cre-  
taceous, Kansas, LOEBLICH & TAPPAN  
Paleont. Contr. Univ. Kansas (Protozoa,  
Art. 3) 1950 pp. 1-15 figs.;  
†*T. latheatica* sp. n. (p. 43) Jurassic,  
U.S.A., LOEBLICH & TAPPAN J.  
Paleont. 24 (1) 1950 pp. 39-60 figs.

*Turrispirillina depressa* sp. n.  
(p. 351) Tasmania, PARR Rep.  
B.A.N.Z. Antarctic Exped. 1929-31  
5B (6) 1950 pp. 233-392 figs.; †*T.*  
*spirella* sp. n. [for *Cornuspira orbicula*  
(Terquem & Berthelin) Sandige  
1933] (p. 16) Jurassic, U.S.A.,  
LOEBLICH & TAPPAN J. Washington  
Acad. Sci. 40 (1) 1950 pp. 5-19 figs.

†*Uhligina* gen. n. (p. 71) *boninensis*  
sp. n. (p. 72) Eocene, Japan and

West Galicia, YABE & HANZAWA Jap. J. Geol. Geogr. 1 (2) 1922 pp. 71-75 figs.

†*Uvigerina calvertensis* sp. n. (p. 222) Miocene, Maryland, U.S.A., CUSHMAN Maryland Dept. Geol. Mines & Water Resour. Bull. 2 1948 pp. 213-267 figs.; †*U. exilis* sp. n. (p. 337) Eocene, Maryland, U.S.A., CUSHMAN Maryland Dept. Geol. Mines & Water Resour. Bull. 2 1948 pp. 213-267 figs.; †*U. directa* sp. n. (p. 308) [for *U. cf. pigmea* Cushman 1930], Miocene, Maryland, U.S.A., DORSEY Maryland Dept. Geol. Mines & Water Resour. Bull. 2 1948 pp. 268-321 figs.; *U. bassensis* sp. n. (p. 340) [for *U. pygmaea* Chapman 1915, non *U. pigmea* d'Orbigny], Tasmania, PARR Rep. B.A.N.Z. Antarctic Exped. 1929-31 5B (6) 1950 pp. 233-392 figs.; †*U. tenuipustulata* sp. n. (p. 60) Miocene, Holland, VOORTHUYSEN Meded. Geol. Stichting Geol. Bureau, Heerlem, N.S. 4 1950 pp. 51-72 figs.

*Vaginulina sublegans* sp. n. (p. 326) [for *V. elegans* Cushman 1932 etc., non d'Orbigny]; *V. inflata* sp. n. p. 327, Antarctic, PARR Rep. R.A.N.Z. Antarctic Exped. 1929-31 5B (6) 1950 pp. 233-352 figs.; *V. exilis* sp. n. (p. 327) Pacific, CUSHMAN & McCULLOCH Allan Hancock Pacific Exped. 6 (6) 1950 pp. 295-364 figs.; †*V. marieri* sp. n. (p. 270); *V. pseudodiscors* sp. n. (p. 271) var. *n. semiornata* (p. 272) Cretaceous, England, KHAN J.R. Micr. Soc. Lond. (3) 70 (3) 1950 pp. 268-279 figs.; †*V. mecyra* sp. n. (p. 13) Jurassic, U.S.A., LOEBLICH & TAPPAN J. Washington Acad. Sci. 40 (1) 1950 pp. 5-19 figs.; †*V. ischyra, lechriosa* spp. n. (p. 56) Jurassic, U.S.A., LOEBLICH & TAPPAN J. Paleont. 24 (1) 1950 pp. 39-60 figs.; †*V. barba, lancea* spp. n. (p. 16); *V. pala, ceta* spp. n. (p. 17) Jurassic, Montana, U.S.A., LALICKER Paleont. Contr. Univ. Kansas (Protozoa, Art. 2) pp. 3-20 figs.

*Vaginulinopsis tasmanica, procelata* spp. n. (p. 324) Tasmania; *V. sublegumen* sp. n. (p. 325) [for *Vaginulina legumen* Brady 1884, non *Nautilus legumen* Linn.; and *V. l.* Wiesner 1931], Antarctic,

PARR Rep. B.A.N.Z. Antarctic Exped. 1929-31 5B (6) 1950 pp. 233-392 figs.; †*V. pseudoscitula* sp. n. (p. 35) Dano-Montian, Algeria, DAM & SIGAL Contr. Cushman Found. Foraminif. Res. 1 (1-2) 1950 pp. 31-37 figs.; †*V. eritheles* sp. n. [for *Marginulina* sp. ? Wickenden, 1933], (p. 9) Jurassic, U.S.A., LOEBLICH & TAPPAN J. Washington Acad. Sci. 40 (1) 1950 pp. 5-19 figs.; †*V. ectypa, enodis* spp. n. (p. 46); *V. epicharis* sp. n. (p. 47), Jurassic, U.S.A., LOEBLICH & TAPPAN J. Paleont. 24 (1) 1950 pp. 39-60 figs.

*Valvulinaria polita* sp. n. (p. 359), Tasmania; *V. parifera* sp. n. (p. 359) off Western Australia, PARR Rep. B.A.N.Z. Antarctic Exped. 1929-31 5B (6) 1950 pp. 233-392 figs.; †*V. oveyi* sp. n. (p. 274); *V. parva* sp. n. (p. 275) [for *Placentula nitida* Berthelin 1880, non Reuss, non *Valvulinaria gracillima* ten Dam 1947], Cretaceous, England, KHAN J.R. Mier. Soc. Lond. (3) 70 (3) 1950 pp. 268-279 figs.; †*V. esnehensis* sp. n. (p. 689) [recorded as nom. nud. Z.R. for 1949 now validated], Paleocene, Egypt, NAKKADY J. Paleont. 24 (6) 1950 pp. 675-692 figs.

†*Valvulinidae*, fossil and recent, CUSHMAN 257.

†*Verbeckina parvula* sp. n. (p. 38) Permian, Iran, DOUGLAS Palaeont. indica, N.S. 22 (7) 1950 pp. 1-58 figs.; †*V. americana* sp. n. (p. 57) Permian, Washington and British Columbia, THOMPSON, WHEELER & DANNER Contr. Cushman Found. Foraminif. Res. 1 (3-4) 1950 pp. 46-63 figs.

†*Verneuilina movina* sp. n. (p. 130) Cretaceous, Italy, CITA Riv. Ital. Paleont. 55 (4) 1949 pp. 121-134 figs.; †*V. luxorensis* sp. n. (p. 683) Paleocene, Egypt, NAKKADY J. Paleont. 24 (6) 1950 pp. 675-692 figs.; †*V. subocenica* sp. n. (p. 12) Eocene and Paleocene, Germany, WICK Abh. senckenb. naturf. Ges. No. 468 1943 pp. 1-40 figs.

†*Verneuilinoides kansasensis* sp. n. (p. 10) Lower Cretaceous, Kansas, LOEBLICH & TAPPAN Paleont. Contr. Univ. Kansas (Protozoa, Art. 3) 1950 pp. 1-15 figs.; †*V. tryphera* sp. n.

p. 42) Jurassic, U.S.A., LOEBLICH & TAPPAN J. Paleont. **24** (1) 1950 pp. 39–60 figs.

*Virgulina rotundata* sp. n. (p. 337) [for *V. subsquamosa* Brady 1884, non Egger], Tasmania, PARR Rep. B.A.N.Z. Antarctic Exped. 1929–31 **1B** (6) 1950 pp. 233–392 figs.; †*V. riscidus* sp. n. (p. 273) Cretaceous, England, KHAN J.R. Mier. Soc. Lond. (3) **70** (3) 1950 pp. 268–279 figs.

†*Volvotextularia* gen. n. *polymorpha* sp. n. (p. 39) Carboniferous, Morocco, TERMIER Notes & Mem. Serv. Carte géol. Maroc **13** 1950 pp. 29–40 figs.

†*Vulvulina gracillima* sp. n. (p. 31) Dano-Montian, Algeria, DAM & SIGAL Contr. Cushman Found. Foraminif. Res. **1** (1–2) 1950 pp. 31–37 figs.

†*Waeringella bailkeyi* sp. n. (p. 438) Pennsylvanian, Utah, THOMPSON, VERVILLE & BISSELL J. Paleont. **24** (4) 1950 pp. 430–465 figs.

†*Yabeina*? sp. n. [no name given], Permian [no definite locality], THOMPSON, WHEELER & DANNER **1163**.

†*Zeaungigerina vianica* sp. n. (p. 293) Eocene; *Z. childi* sp. n. (p. 295) Oligocene, S.W. Iran, THOMAS Ann. Mag. nat. Hist. (12) **3** 1950 pp. 287–301 figs.

#### (d) Heliozoa

[No record]

#### (e) Radiolaria

†Late Palaeozoic to Triassic or early Jurassic radiolaria, Japan, ICHIKAWA **565**.

†*Carposphaera pulchra, mitakeana* spp. n. (p. 293) [age not specified], Japan, ICHIKAWA J. Fac. Sci. Univ. Tokyo Sect. II, Geol. etc. **7** (3–5) 1950 pp. 281–315 figs.

†*Cenellipsis nipponica, subelongata* spp. n. (p. 295) [age not specified], Japan, ICHIKAWA J. Fac. Sci. Univ. Tokyo, Sect. II, Geol. etc. **7** (3–5) 1950 pp. 281–315 figs.; †*C.? mirabilis* sp. n. (p. 296) [age not specified], Japan, ICHIKAWA J. Fac. Sci. Univ. Tokyo Sect. II, Geol. etc. **7** (3–5) 1950 pp. 281–315 figs.

†*Conosphaera nipponica* sp. n. (p. 291); *C. magna* sp. n. (p. 292) [age not specified], Japan, ICHIKAWA J. Fac. Sci. Univ. Tokyo, Sect. II, Geol. etc. **7** (3–3) 1950 pp. 281–315 figs.

†*Cryptocapsa gregaria* sp. n. (p. 305) [age not specified], Japan, ICHIKAWA J. Fac. Sci. Univ. Tokyo, Sect. II, Geol. etc. **7** (3–5) 1950 pp. 281–315 figs.

†*Dicocolapsa kimurai* sp. n. (p. 304) [age not specified], Japan, ICHIKAWA J. Fac. Sci. Univ. Tokyo, Sect. II, Geol. etc. **7** (3–5) 1950 pp. 281–315 figs.

†*Dictyastrum robustum* sp. n. (p. 302) [age not specified], Japan, ICHIKAWA J. Fac. Sci. Univ. Tokyo, Sect. II, Geol. etc. **7** (3–5) 1950 pp. 281–315 figs.

†*Dictyomitra extensa, fragosa* spp. n. (p. 309); *D. brevissima, longicephala* spp. n. (p. 310) [age not specified], Japan, ICHIKAWA J. Fac. Sci. Univ. Tokyo, Sect. II, Geol. etc. **7** (3–5) 1950 pp. 281–315 figs.

†*Ellipsoxiphus tenuispinosus* sp. n. (p. 298) [age not specified], Japan, ICHIKAWA J. Fac. Sci. Univ. Tokyo, Sect. II, Geol. etc., **7** (3–5) 1950 pp. 281–315 figs.

†*Halidictyum* gen. n. (p. 300) *haeckelii* sp. n. (p. 301) (genotype) [age not specified], Japan, ICHIKAWA J. Fac. Sci. Univ. Tokyo, Sect. II, Geol. etc. **7** (3–5) 1950 pp. 281–315 figs.

†*Haxastylus bellaturus* sp. n. (p. 295) [age not specified], Japan, ICHIKAWA J. Fac. Sci. Univ. Tokyo, Sect. II, Geol. etc. **7** (3–5) 1950 pp. 281–315 figs.

†*Lithapium rigidum* sp. n. (p. 297) [age not specified], Japan, ICHIKAWA J. Fac. Sci. Univ. Tokyo, Sect. II, Geol. etc. **7** (3–5) 1950 pp. 281–315 figs.

†*Lithocampe pentagonale* sp. n. (p. 312) [age not specified], Japan, ICHIKAWA J. Fac. Sci. Univ. Tokyo, Sect. II, Geol. etc. **7** (3–5) 1950 pp. 281–315 figs.

†*Lithocorys* gen. n. *nipponica* sp. n. (p. 311) (genotype); *L. pseudoacreata* sp. n. (p. 311) [age not specified],

Japan, ICHIKAWA J. Fac. Sci. Univ. Tokyo, Sect. II, Geol. etc., 7 (3-5) 1950 pp. 281-315 figs.

†*Meyenella* gen. n. (p. 211) *meyenii* sp. n. (genotype) [for *Sphaerozoum* auct.] (p. 211); *M. notula* sp. n. (p. 213); ?*M. hensoni* sp. n. (p. 213) Jurassic or Cretaceous, Oman, DAVIS Proc. Geol. Assoc. Lond. 61 (3) 1950 pp. 206-217 figs.

†*Palaeacanthus* gen. n. (p. 214) *spinosus* sp. n. (genotype), Triassic to ? Cretaceous, Oman and elsewhere, DAVIS, Proc. Geol. Assoc. Lond. 61 (3) 1950 pp. 206-217 figs.

†*Perichlamydium tenuis* sp. n. (p. 300) [age not specified], Japan, ICHIKAWA J. Fac. Sci. Univ. Tokyo, Sect. II, Geol. etc., 7 (3-5) 1950 pp. 281-315 figs.

†*Porodiscus* (*Trematodiscus*) *yamurai* sp. n. (p. 298); *P. (T.) minor* sp. n.; *P. (Discospira) sublaevis* sp. n. (p. 299); *P. (Porodiscus) subgen. n.* *trigonis* sp. n. (p. 299) [age not specified], Japan, ICHIKAWA J. Fac. Sci. Univ. Tokyo, Sect. II, Geol. etc. 7 (3-5) 1950 pp. 281-315 figs.

†*Rhopalastrum kobayashii* sp. n. (p. 302); *R. flabellum* sp. n. (p. 303) [age not specified], Japan, ICHIKAWA J. Fac. Sci. Univ. Tokyo, Sect. II, Geol. etc. 7 (3-5) 1950 pp. 281-315 figs.

†*Spongurus splendidus* sp. n. (p. 298) [age not specified], Japan, ICHIKAWA J. Fac. Sci. Univ. Tokyo, Sect. II, Geol. etc. 7 (3-5) 1950 pp. 281-315 figs.

†*Staurodoras hawasinaensis*, *lehneri* spp. n. (p. 210) Jurassic or Cretaceous, Oman, DAVIS, Proc. geol. Assoc. London 61 (3) 1950 pp. 206-217 figs.

†*Stichocapsa modesta*, *asiatica* spp. n. (p. 313); *S. subjucunda* sp. n. (p. 314); *S. oblongula* subsp. n. *minuta* (p. 314); *S. cepula* subsp. n. *circula* (p. 315) [age not specified], Japan, ICHIKAWA J. Fac. Sci. Univ. Tokyo, Sect. II, Geol. etc. 7 (3-5) 1950 pp. 281-315 figs.

*Theocapsa parva* sp. n. (p. 306) [age not specified], Japan, ICHIKAWA J. Fac. Sci. Univ. Tokyo, Sect. II, Geol. etc. 7 (3-5) 1950 pp. 281-315 figs.

†*Theocorys mitakensis* sp. n. (p. 305) [age not specified], Japan, ICHIKAWA J. Fac. Sci. Univ. Tokyo, Sect. II, Geol. etc. 7 (3-5) 1950 pp. 281-315 figs.

†*Tricolocapsa* (*Tricolocapsium*) *rotundata*, *pseudopilula* spp. n. (p. 306); *T. (T.) elegans* sp. n., *T. (Tricolocapsula) decrescens* sp. n. (p. 307) [age not specified], Japan, ICHIKAWA J. Fac. Sci. Univ. Tokyo, Sect. II, Geol. etc. 7 (3-5) 1950 pp. 281-315 figs.

†*Xiphosphaera huzimotoi* sp. n. (p. 294) [age not specified], Japan, ICHIKAWA J. Fac. Sci. Univ. Tokyo, Sect. II, Geol. etc. 7 (3-5) 1950 pp. 281-315 figs.

## 2. MASTIGOPHORA

Evolution and systematics of flagellates in termites, KIRBY 634.

### A. PHYTOMASTIGINA

Systematics of freshwater Phyтомастигина, HUBER-PESTALOZZI 553, 554.

Monomastiginae subcl. n., Monomastigaceae fam. n. (p. 2), HUBER-PESTALOZZI Binnegewässer, Stuttgart 16 (3) 1950 pp. 1-310 figs.

#### (a) Chrysomonadida

State of the systematics of Cocco-lithophoridæ, BERNARD 100.

Silicoflagellata : general systematics, DEFLANDRE 276.

†Cretaceous and Tertiary Silicoflagellidae, DEFLANDRE 283.

*Chromulina psammobia* sp. n. (p. 208) marine, FAURÉ-FREMIET Bull. biol. France-Belg. 84 (2) 1950 pp. 207-214 figs.

†*Corbisema rüsti* sp. n. (p. 136) [for *Dictyocha speculum*? Rüst 1888] Cretaceous, Germany, DEFLANDRE Microscopie, Paris 2 (3) 1950 pp. 117-142 figs.; †*C. bimucronata* sp. n. (p. 191); *C. spinosa* sp. n. (p. 193), ?Miocene, Barbados, DEFLANDRE Microscopie, Paris 2 (4) 1950 pp. 191-210 figs.

*Cyclonexis erinus* sp. n. (p. 304)  
sphagnum swamp, England, JANE  
Proc. Linn. Soc. Lond. (152) 1939-40  
(3) 1940 pp. 298-309 figs.

†*Dictyocha frenguelli* sp. n. (p. 194)  
[for *D. fibula* Ehr. forma, Deflandre  
1940] Eocene, U.S.S.R.; *D. muta-*  
*bilis* sp. n. (p. 197) [for *D. rhombica*  
Deflandre 1941, non Lemmermann  
née Schulz], Miocene, California, *D.*  
*macilenta* sp. n. (p. 197) [for *Schanis-*  
*landii* (Lemm.) Frenguelli 1940, non  
alior, and ?*Distephanus crux* var.  
*mesophthalmus* (Eht.) Lemmermann  
partim], Miocene, Hungary; *D.*  
*retrospira* sp. n. (p. 200); *D. japonica*  
sp. n. (p. 201) Miocene, Japan,  
DEFLANDRE Microscopie, Paris 2 (4)  
1950 pp. 191-210 figs.

*Kephyrion valkanovi* sp. n. (?)  
(p. 72) brackish water lake, Bulgaria,  
HUBER-PESTALOZZI Binnegewässer,  
Stuttgart 16 2 (1) 1941 pp. 1-365 figs.

†*Micrantholithus* gen. n. (p. 1158)  
*flos* (genotype), *vesper* spp. n.,  
Eocene, France, DEFLANDRE C.R.  
Acad. Sci. Paris 231 (21) 1950 pp.  
1156-1158 figs.

†*Naviculopsis rubusta* sp. n. (p.  
202) Eocene, U.S.S.R.; *N. foliacea*  
sp. n. (p. 204) [for *Dictyocha* (?)  
*biapiculata* Lemm. sec. Hanna non  
alior and *D.* (?) b. Lemm. see Clark  
and Campbell non alior], Eocene,  
California, DEFLANDRE Microscopie,  
Paris 2 (4) 1950 pp. 191-210 figs.

*Synochromonas elaeochrus* sp. n.  
(p. 307) stagnant water, England,  
JANE Proc. Linn. Soc. Lond. (152)  
1939-40 (3) 1940 pp. 298-309 figs.

*Synura bioreti* sp. n. (p. 141)  
freshwater, France, HUBER-PESTA-  
LOZZI Binnegewässer, Stuttgart 16 (2)  
(1) 1942 pp. 1-365 figs.

Vallacertidae fam. n. (p. 128),  
DEFLANDRE Microscopie, Paris 2 (3)  
1950 pp. 117-142 figs.

### (b) Cryptomonadida

*Cryptomonas buetschlii* nom. n. (p.  
66) [for *Chilomonas paramaecium*  
Ehrenberg fide Bütschli (coloured  
form)], in puddle, HUBER-PESTA-  
LOZZI Binnegewässer, Stuttgart 16  
(3) 1950 pp. 1-310 figs.

### (c) Dinoflagellata

Listed dinoflagellates of the Black  
Sea, STROIKINA 1116.

Dinoflagellates of Soviet Union,  
KISELEV 637.

New or rare pecidinians from the  
south-equatorial Pacific, RAMPI 914.

*Amphidium turicense* sp. n. (p. 104)  
planktonic in Lake Zürich; *A.*  
*geitleri* nom. n. (p. 105) [for *Gymno-*  
*dinium amphibinioides* Geitler, and *A.*  
*amphidiinoides* Geitler fide Schiller],  
Austria and Switzerland, HUBER-  
PESTALOZZI Binnegewässer, Stuttgart  
16 (3) 1950 pp. 1-310 figs.

*Cystodiniaceae* fam. n. (p. 287),  
HUBER-PESTALOZZI Binnegewässer,  
Stuttgart 16 (3) 1950 pp. 1-310 figs.

*Peridinium tāningi* sp. n. (p. 7),  
equatorial Pacific, RAMPI Bull. Inst.  
océanogr. Monaco, No. 974 1950 pp.  
1-12 figs.

### (d) Euglenoidida

*Dinophysis spinosa* sp. n. (p. 3)  
New Zealand area, RAMPI Bull. Inst.  
océanogr. Monaco, No. 974 1950  
pp. 1-12 figs.

*Histioneis minuscula, oceanica* spp.  
n. (p. 4) equatorial Pacific, RAMPI  
Bull. Inst. océanogr. Monaco, No. 974  
1950 pp. 1-12 figs.

*Ornithocercus bilobatus* sp. n. (p. 3)  
Fiji area, RAMPI Bull. Inst. océanogr.  
Monaco, No. 974 1950 pp. 1-12 figs.

*Paraperanema* gen. n. *longicauda*  
sp. n. (p. 369) pond water, Iowa,  
U.S.A., SHAWHAN & JAHN Proc.  
Iowa Acad. Sci. 54 1947 pp. 369-371  
figs.

*Pavillardinium pacificum* sp. n.  
(p. 10) near New Zealand coasts,  
RAMPI Bull. Inst. océanogr. Monaco,  
No. 974 1950 pp. 1-12 figs.

*Telonema* placed in fam. Cyatho-  
monadidae, probably belonging to  
the Euglenoidina, HOLLANDE &  
CACHON 543.

*Trachelomonas* sp. n. [no name  
given], from pond, Holland, MIDDEL-  
HOEK 775; †*T.* in the Miocene,  
Italy, SILVERTRI 1067; *T.* spp.  
found in Holland, MIDDELHOEK 776.

## (e) Phytomonadida

*Polytoma microsphaericum* sp. n. (p. 545); *P. pseudotetraolare* nom. n. (p. 546) [for *P. tetroolare* var. *astigmatum* Ondratschek 1941]; *P. palmelloides* sp. n. (p. 547); *P. macrosphaericum* sp. n. (p. 548); *P. uliginosum, cogatum* spp. n. (p. 549) in culture from Prague, MOEWUS Arch. Mikrobiol. Berlin **14** (4) 1950 pp. 542-553 figs.

## B. ZOOMASTIGINA

## (f) Protomonadida

*Bodo lacertae* var. n. *ophidiae* (p. 620) from various S. African snakes, FANTHAM & PORTER Proc. Zool. Soc. Lond. **120** 1950 pp. 599-646 figs.

*Caviomonas* gen. n. (p. 385) *mobilis* sp. n. from guineapig, *Cavia porcella* U.S.A., NIE J. Morph. **86** 1950 pp. 381-494 figs.

*Chilomitus conexus* sp. n. from guinea-pig, *Cavia porcella*, U.S.A., NIE J. Morph. **86** 1950 pp. 381-494 figs.

*Crithidia familiaris* sp. n. (p. 327) from bug *Cenaeus carnifex* S. Africa, GIBBS Parasitology **40** 1950 pp. 322-327 figs.

*Embadomonas*: synonym of *Retortamonas* (q.v.).

*Leishmania donovani* subspp. n. *donovani, tropica, brasiliensis*: HOARE Trop. Dis. Bull. **47** 1950 pp. 828-829 [Review of MOHIUDDIN '82]; *L.* differentiation of spp. infecting man, KIRK **636**.

*Leptomonas ludwigi* sp. n. (p. 5) from larvae of *Tipula abdominalis* Czechoslovakia, KRAMAŘ Vestn. Českosl. zool. Společn. **14** 1950 pp. 55-76 figs.

*Palisporomonadidae* fam. n. (p. 154) for *Palisporomonas* gen. n. (q.v.), SAEDELER Ann. Soc. R. Zool. Belg. **77** 1947 pp. 90-165 figs.

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## (g) Trichomonadida

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*Devescovina duboscqui* sp. n. (p. 36) from termites, GRASSÉ & HOLLANDE Ann. Sci. nat., Paris (11) **12** 1950 pp. 25-64 figs.

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(p. 261) from N. American vole and other rodents, WENRICH & SAXE J. Parasit. **36** 1950 pp. 261–269 figs.

### (h) Hypermastigida

*Holomastigotoides operculatum* sp. n. (p. 71) from Indian termite (*indet.*), FROLANO DE MELLO An. Inst. Med. trop., Lisbon **6** [1950] pp. 71–74 figs.

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### (j) Polymonadida

[No record]

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†*Ebriopsis aplanata* sp. n. (p. 159) Eocene, U.S.S.R., DEFLANDRE C.R. Acad. Sci. Paris, **231** (2) 1950 pp. 158–160 figs.

†*Falsebria* gen. n. (p. 159) *ambigua* (genotype) Paleocene, Jutland; *F. a. forma* n. *coralloidea*, *brachiolata* (p. 160), Eocene U.S.S.R.; *F. imitata* sp. n. (p. 160) Paleocene, Jutland; *F. rossica* sp. n. (p. 160) Eocene, U.S.S.R., DEFLANDRE C.R. Acad. Sci. Paris, **231** (2) 1950 pp. 158–160 figs.

†*Hovassebria sinistra* sp. n. (p. 160) Oligocene, Oamaru, DEFLANDRE C.R. Acad. Sci. Paris **231** (2) 1950 pp. 158–160 figs.

†*Hystrichosphaeridium pattei* sp. n. (p. 529) Jurassic, France, VALENSI Bull. Soc. géol. Fr. (5) **18** (6–7) 1948 pp. 537–550 figs.

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*spp. n.* (p. 547); *M. polyedricum* sp. n. (p. 548), Jurassic, France, VALENSI Bull. Soc. géol. Fr. (5) 8 (6-7) 1948 pp. 537-550 figs.

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#### A. COCCIDIOMORPHA

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*Tipulocystis* gen. n. (p. 59) *maximae* sp. n. from larvae of *Tipula abdominalis* Czechoslovakia, KRAMAŘ Vestn. Českosl. zool. Společn. 14 1950 pp. 55-76 figs.

*Urospora hardyi* sp. n. (p. 473), *U. legeri* sp. n. (p. 476) from *Sipunculus nudus*, Naples, GOODRICH Quart. J. micr. Sci. 91 1950 pp. 469-476 figs.

##### (b) Coccidiida

*Aggregata leandri* sp. n. (p. 465) from prawn, *Leander squilla*, Naples, GOODRICH Quart. J. micr. Sci. 91 1950 pp. 465-467.

*Eimeria petauristae* sp. n. (pp. 156, 69) from Indian flying squirrel *Petaurus inornatus*, RAY & SINGH Proc. Indian Sci. Congr. 36th (3) 1949 p. 156 and Proc. zool. Soc. Bengal 3 1950 pp. 65-70 figs.

*Haemogregarina bertonii* sp. n. (p. 114) from *Lepidosiren paradoxa*, Paraguay, SCHOUTEN Rev. Soc. cient. Paraguay 5 1941 pp. 114-115 figs.; *H. hamata* sp. n. (p. 330) from lizard *Lacerta jacksoni* Uganda, GARNHAM Parasitology 40 1950 pp. 328-337 figs.; *H. tuatarae* sp. n. (p. 529) from Rhynchocephalian *Sphenodon punctatus* New Zealand, LAIRD Proc. Zool. Soc. Lond. 120 1950 pp. 529-533 figs.

*Henneguya minchini* sp. n. (p. 329) from African snake *Crotaphopeltis degeni*, GARNHAM Parasitology 40 1950 pp. 328-337 figs.

##### (c) Haemosporidia

*Babesia rodhaini* sp. n. (p. 85) from African wild rat, *Thamnomys surdaster*, BERGHE, VINCKE, CHARDOME & BULCKE Ann. Soc. Belge Méd. trop. 30 1950 pp. 83-86 figs.; *B. cati* sp. n. (p. 395) from cat, India, MUDALIAR, ACHARY & ALWAR Indian vet. J. 26 1950 pp. 392-395 figs.

*Haemoproteus macropigmentatus* sp. n. (p. 162), *H. globulosus* sp. n. (p. 163) from *Carduelis carduelis*; *H. chloris* sp. n. (p. 165) from *Chloris chloris*; *H. multiparasitans* sp. n. (p. 167) from *Athene noctua*; *H. turtur* sp. n. (p. 169) from *Streptopelia turtur*, Spain, ORTEGA & BERENGUER Rev. Iber. Parasit. 10 1950 pp. 141-185 figs.; *H.*: list of spp. and avian hosts, ORTEGA & BERENGUER 832.

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*Plasmodium pythonis* sp. n. (p. 629) from *Python sebae*; *P. melanoleuca* sp. n. (p. 629) from *Naja melanoleuca*; *P. causi* sp. n. (p. 630) from *Causus rhombatus*; *P. bitis* sp. n. (p. 630) from *Bitis arietans*, S. Africa, FANTHAM & PORTER Proc. Zool. Soc. Lond. 120 1950 pp. 599-646 figs.; *P. vassali* subsp. n. *malayensis* from Malay squirrels *Callosciurus* spp., FIELD & EDESON Bull. Inst. Med. Res. Malaya No. 2 1949 24 pp. figs.

#### B. CNIDOSPORIDIA

##### (d) Myxosporidia

*Ceratomyxa shasta* sp. n. (p. 457) from California trout *Salmo gairdneri* NOBLE J. Parasit. 36 1950 pp. 457-460 figs.

*Henneguya vitiensis* sp. n. (p. 286) from fish *Leiognathus fasciatus*, Fiji, LAIRD J. Parasit. 36 1950 pp. 285-292 figs.

*Myxobolus ochridensis* sp. n. (p. 57), *M. turbinoides* sp. n. (p. 59) from gills of fishes, Lake Ochrida, Yugoslavia, GEORGÉVITCH Bull. Acad. Serb. Sci.,

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*subepithelialis* sp. n. (p. 364) from  
*Gobio gobio*, Czechoslovakia, WEISER  
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### (e) Microsporidia

*Bacillidium daphniae* sp. n. (p. 131)  
from body-cavity of *Daphnia* spp.,  
Bohemia, JIROVEC Zool. Anz. **140**  
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*Coccoconema ſulci* sp. n. (p. 295) from  
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from body-cavity of Cladoceran  
*Sida crystallina*, Bohemia, JIROVEC  
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*Gurleya nova* sp. n. (p. 8) hyper-  
parasitic in *Spirobutschliella chattoni*  
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*Camptochironomus tentans*, Germany,  
WEISER Zool. Anz. **141** 1943 pp. 255–  
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124) from larvae of *Trichocladius*,  
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*Cambarus bartoni*, SPRAGUE J. Para-  
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### (f) Actinomyxidia

[No record]

### (g) Sarcosporidia

*Sarcocystis atractaspidis* sp. n.  
(p. 117) from snake *Atractaspis*  
*leucomelas*, Kenya, PARENZAN Boll.  
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### (h) Haplosporidia

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(p. 328) from oysters, *Crassostrea*  
*virginica*, U.S.A., MACKIN, OWEN &  
COLLIER Science **111** 1950 pp. 328–  
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France, ARVY Bull. Soc. zool. Fr.  
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### Sporozoa incertae sedis.

*At toxoplasma* gen. n. (p. 332)  
*argyae* sp. n. from African bird  
*Argya rubiginosa*, GARNHAM Para-  
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## 4. CILIOPHORA

### A. OPALINATA

*Zelleriella* : list of recorded spp.,  
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*Z. cuneata* sp. n. (p. 39), *Z. excavata*  
sp. n. (p. 48) from Argentine Amphibia,  
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### B. CILIATA

Ciliata attached to branchiae of  
land and amphibious isopods,  
Europe, MATTHES **759**.

Ciliata attached to *Cordylophora*, brackish water, Germany, CASPERS 173.

New freshwater ciliates from New Zealand, BARY 72.

(a) **Holotrichida**

Freshwater Holotrichida, New Zealand, BARY 71.

*Ancistrina tihanyensis* sp. n. (p. 204) from pallial cavity of *Lithoglyphus naticoides*, Hungary, RAABE Ann. Univ. M. Curie-Skłodowska 5c (5) 1950 pp. 197-215 figs.

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### (b) Heterotrichida

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*Rhizodomus* gen. n. (p. 389) *tagatzii* sp. n. (p. 390) from Peter the Great Bay, STRELKOV & VIRKETIS C.R. Acad. Sci., Moscow, N.S. 1950 74 pp. 389-391 figs.

*Stenosemella monacense* sp. n. (p. 4) Mediterranean, Monaco, RAMPI Bull. Inst. océanogr. Monaco No. 965 1950 pp. 1-7 figs.

*Stentor loricata* sp. n. (p. 7); *S. rubra* sp. n. (p. 10) freshwater, New Zealand, BARY Zool. Publ. Vict. Univ. Coll., N.Z. No. 2 1950 pp. 1-19 figs.

### (c) Oligotrichida

Tintinnids from the coast of Portugal, SOUSA E SILVA 1084.

Tintinnids of the waters of Monaco, RAMPI 913.

Tintinnids in the western Mediterranean, MASSUTÍ & NAVARRO 753.

### (d) Entodiniomorpha

[No record]

### (e) Hypotrichida

*Uroleptus setiformis* sp. n. (p. 12) freshwater, New Zealand, BARY Zool. Publ. Vict. Univ. Coll., N.Z. No. 2 1950 pp. 1-19 figs.

### (f) Peritrichida

Peritrichida of Germany : systematic description, with new spp., NENNINGER 820.

Peritrichida from Germany, MATTHES 760.

Peritrichida from beetles and bugs, Germany, LUST 716.

Freshwater Peritrichida, New Zealand, BARY 71.

*Carchesium aselli* var. n. (p. 219) ovatum on *Asellus*; *C. erlangensis* sp. n. (p. 219) on *Cloeon*; *C. amphibiarum* sp. n. (p. 221) on tadpoles; *C. steneri* sp. n. (p. 222) ectozoic; *C. cyclopidarum* sp. n. (p. 222) on *Cyclops*; *C. trichopterarum* sp. n. (p. 222) ectozoic; *C. gracilis* sp. n. (p. 222) on *Stenophylax*, Germany, NENNINGER Zool. Jahrb. (Syst.) 77 1948 pp. 169–266 figs.; *C. voighti* sp. n. (p. 614) attached to *Ligia oceanica*, North sea coast, MATTHES Zool. Jahrb. (Syst.) 78 1950 pp. 573–640 figs.

*Cothurnia brevistyla* sp. n. (p. 229) on algae, Germany, NENNINGER Zool. Jahrb. (Syst.) 77 1948 pp. 169–266 figs.

*Epistyliis diaptomi* var. n. (p. 179) infundibula on *Diaptomus*; *E. anophelis* sp. n. (p. 180) on mosquitos; *E. nympharum* var. n. (p. 180) major on *Chironomus*; *E. ovata* sp. n. (p. 181) on *Chironomus*; *E. pürneri* sp. n. (p. 182) on *Chironomus*; *E. bimarginata* sp. n. (p. 183) on leeches; *E. b. var. n.* (p. 183) urnula on crustacea; *E. balatonica* var. n. (p. 184) major on *Stenophylax*; *E. liebmanni* sp. n. (p. 185) on algae; *E. lacustris* var. n. (p. 185) magna on *Cloeo*; *E. kolbi* sp. n. (p. 186) on crustacea; *E. daphniae* var. n. (p. 186) infundibula on *Sida*; *E. longifila* sp. n. (p. 186) on *Eudiaptomus*; *E. agrionis* sp. n. (p. 18) on *Agrion*; *E. formosa* sp. n. (p. 188) on *Limnophilus*; *E. astaci* sp. n. (p. 188) on crayfish; *E. stammeri* sp. n. (p. 188) on *Asellus*; *E. plicatalis* var. n. (p. 190) dytiscarum in *Dytiscus*; *E. p. var. n.* (p. 191) on tadpoles; *E. fuitans* var. n. (p. 191) insidens on Tentipedidae etc., Germany, NENNINGER Zool. Jahrb. (Syst.) 77 1948 pp. 169–266 figs.; *E. cordylophorae* sp. n. (p. 252) attached to *Cordylophora*, brackish water, Germany, CASPERS Zool. Jahrb. (Syst.) 78 1949 pp. 251–262 figs.

*Glossatella tintinnabulum* var. n. (p. 172) astritum attached to tadpoles, Germany, NENNINGER Zool. Jahrb. (Syst.) 77 1948 pp. 169–266 figs.

*Intranstylum elegans* sp. n. (p. 210) on crustaceans, Germany, NENNIN-

GER Zool. Jahrb. (Syst.) 77 1948 pp. 169–266 figs.

*Lagenophryrus stammeri* sp. n. (p. 351) attached to ostracod, LUST Zool. Jahrb. (Syst.) 79 1950 pp. 350–352 figs.

*Opercularia lichtensteini* var. n. (p. 194) macrostyla on *Dytiscus*; *O. rhanti* sp. n. (p. 196) on *Rhantus*; *O. doliformis* sp. n. (p. 197) on *Ilybius*; *O. hydropori* sp. n. (p. 197) on *Hydroporus*; *O. hyphydri* sp. n. (p. 197) on *Hypridrus*; *O. gyrini* sp. n. (p. 198) on *Gyrinus*; *O. philydri* sp. n. (p. 198) on *Philydrus*; *O. scyphostyla* sp. n. (p. 199) on *Philydrus*; *O. halipli* sp. n. (p. 201) on *Haliplus*; *O. procera* sp. n. (p. 201) on *Haliplus*; *O. corisae* var. n. (p. 203) incisa on *Sigara*; *O. longigula* sp. n. (p. 204) on *Cyclops*; *O. sigarae* sp. n. (p. 204) on *Sigara*; *O. pleae* sp. n. (p. 205) on *Plea*; *O. asellicola* var. n. (p. 206) diversa on *Asellus*; *O. cartilaginipes* sp. n. (p. 207) on *Megapus*; *O. articulata* var. n. (p. 208) macrodisca on beetles; *O. berberina* var. n. (p. 208) similis on *Noterus*; *O. b. var. n.* (p. 108) dichotoma on crustaceans, Germany, NENNINGER Zool. Jahrb. (Syst.) 77 1948 pp. 169–266 figs.; *O. stammeri* sp. n. p. 602, attached to *Oniscus asellus*, MATTHES Zool. Jahrb. (Syst.) 78 1950 pp. 573–640 figs.; *O. tretzi* sp. n. (p. 438) on ostracods; *O. reifi* sp. n. (p. 438) on *Anoetus*; *O. astacicola* sp. n. (p. 439) on *Astacus torrentum*, Germany, MATTHES Zool. Jahrb. (Syst.) 79 1950 pp. 437–448 figs.; *O. articulata formm. n. styliformis, extensa* (p. 364) on *Hydrops piceus*; *O. corisae formm. n. incisa, arcula* (pp. 366, 367) on *Sigara* spp.; *O. coronata, reichenowi* sp. n. (p. 369) on *Corexa punctata* and *Sigara striata* respectively, Germany, LUST Zool. Jahrb. (Syst.) 79 1950 pp. 353–436 figs.

*Operculariella* gen. n. (p. 166) *parasitica* sp. n. from oesophagus of Dytiscid beetles, Germany, STAMMER Zool. Jahrb. (Syst.) 77 1948 pp. 163–168 figs.

*Opisthostyla thienemanni* sp. n. (p. 177) on leeches; *O. tritora* sp. n. (p. 178) on leech, Germany, NENNINGER Zool. Jahrb. (Syst.) 77 1948 pp. 169–266 figs.

*Orbopercularia* gen. n. (p. 371) [genotype *Opercularia berberina* Linn.]; *O. serrata* sp. n. (p. 372) on *Limnoxenus oblongus* and *Anacaena limbata*; *O. lichtensteini* form. n. *hebetata* (p. 373) on *Hydroporus tristis*; *O. turgida* sp. n. (p. 374) on various insects; *O. mattheri* sp. n. (p. 374) on *Philydrus frontalis*; *O. nenningerae* sp. n. (p. 375) on various insects; *O. ilybi* sp. n. *fusiforma* (p. 377) on *Agabus uliginosus* and *Ilybius fuliginosus*; *O. wetzchi* sp. n. (p. 378) on *Acilius sulcatus*; *O. ominosa* sp. n. (p. 379) on *Gyrinus marinus* and *G. substriatus*; *O. inclinata* sp. n. (p. 380) on *Agabus sturmii* and *Colymbetes fuscus*; *O. haliplorum*, *sitiens* spp. n. (p. 381) on various insects; *O. illustris* sp. n. (p. 382) on *Hydroporus tristis*; *O. liebmanni* sp. n. (p. 382) on various insects; *O. stillerae* sp. n. (p. 383) on *Graphoderes cinereus*; *O. quasiinvoluta* sp. n. (p. 383) on *Dytiscus marginalis*; *O. triangulata* sp. n. (p. 384) on *Rhantus punctatus*, Germany, LUST Zool. Jahrb. (Syst.) 79 1950 pp. 353-436 figs.

*Pyxidium canthocampti* var. n. (p. 191) *singularis* on *Philydrus*; *P. ventriosa* sp. n. (p. 192) on *Coretha*; *P. uselli* var. n. (p. 193) *fusiformum* on *Asellus*; *P. piscicola* sp. n. (p. 193) on leeches; *P. kahli* sp. n. (p. 194) on *Asellus*, Germany, NENNINGER Zool. Jahrb. (Syst.) 77 1948 pp. 169-266 figs.; *P. stammeri*, *minuta* spp. n. (p. 362) on various insects, Germany, LUST Zool. Jahrb. (Syst.) 79 1950 pp. 353-436 figs.

*Rhabdostyla tubificis* sp. n. (p. 176) on *Tubifex*; *R. volvocis* sp. n. (p. 176) on *Volvox*; *R. ovum* var. n. (p. 177) *culicidarum* on mosquitos; *R. dixae* sp. n. (p. 177) on *Dixa*, Germany, NENNINGER Zool. Jahrb. (Syst.) 77 1948 pp. 169-266 figs.

*Scyphidia amphibiarum* sp. n. (p. 172) on tadpoles; *S. hirudineorum* sp. n. (p. 172) on leeches; *S. beebei* sp. n. (p. 173) *Cyclops*; *S. helobellae* sp. n. (p. 174) on leech; *S. haemopis* sp. n. (p. 175) on leech; *S. ostracodarum* sp. n. (p. 175) on ostracod, Germany, NENNINGER Zool. Jahrb. (Syst.) 77 1948 pp. 169-266 figs.

*Trichodina ranae* sp. n. (p. 3) from *Rana ridibunda*, Portugal, CUNHA

Mem. Mus. zool. Univ. Coimbra 202 1950 pp. 1-4 figs.

*Vaginicola gigantea* var. n. (p. 228) *transversa* on algae, Germany, NENNINGER Zool. Jahrb. (Syst.) 77 1948 pp. 169-266 figs.

*Vorticella extensa* var. n. (p. 210) *macronucleata* on Ephemeroptera larvae; *V. fusiforma* sp. n. (p. 210) on tadpoles; *V. procera* sp. n. (p. 211) on tadpoles; *V. exilis* sp. n. (p. 212) ectozoic; *V. simplex* sp. n. (p. 212) on *Asellus*; *V. crassicaulis* sp. n. (p. 213) on Ostracods; *V. venusta* sp. n. (p. 213) on *Asellus*; *V. picta* var. n. (p. 214) *major* on *Cladophora*; *V. intermissa* sp. n. (p. 214) on beetles; *V. convallaria* var. n. (p. 215) *compacta* on mosquitos etc.; *V. latifunda* sp. n. (p. 216) on *Lestes*; *V. flexuosa* sp. n. (p. 216) on *Asellus*; *V. urnula* sp. n. (p. 217) on *Cyclops*; *V. rotunda* sp. n. (p. 217) on *Lestes*; *V. microstoma* var. n. (p. 218) *defluviatilis* on *Tubifex*; *V. incerta* sp. n. (p. 219) on crustaceans, Germany, NENNINGER Zool. Jahrb. (Syst.) 77 1948 pp. 169-266 figs.

*Zoothamnium simplex* var. n. (p. 224) *minor* on *Cloeon*; *Z. affine* var. n. (p. 225) *trizonatum* on crustaceans; *Z. belliformum* sp. n. (p. 226) on *Asellus*; *Z. procerus* var. n. (p. 226) *varius* on crustaceans; *Z. stilleri* sp. n. (p. 227) on crustaceans, Germany, NENNINGER Zool. Jahrb. (Syst.) 77 1948 pp. 169-266 figs.; *Z. kahli* sp. n. (p. 254); *Z. procerissimum* sp. n. (p. 255) attached to *Cordylophora*, brackish water, Germany, CASPERS Zool. Jahrb. (Syst.) 78 1949 pp. 251-262 figs.

### (g) Chonotrichida

Systematics and affinities of Chonotrichida, GUILCHER 475.

### C. SUCTORIA

Affinities of the Tentaculifera closely allied to Holotrichida, GUILCHER 475.

### PROTOZOA INCERTAE SEDIS.

*Eperythrozoon suis* sp. n. (p. 329) causing disease of pigs in America, SPLITTER Amer. J. vet. Res. 11 1950 pp. 324-330 figs. (also Science 111 1950 p. 513-514); *E. parvum* sp. n. (p. 513) from American pigs, SPLITTER Science 111 1950 pp. 513-514.

